1978年海员培训、发证和值班标准国际公约

本公约各缔约国，

 本着制订一致同意的海员培训、发证和值班的国际标准，以增进海上人命与财产的安全和保护海洋环境的愿望，

 考虑到达到这一目的的最好办法为缔结一项海员培训、发证和值班标准国际公约，

 现经协议如下：

 第一条 公约的一般义务

 一、各缔约国承担义务实施本公约及其附则的各项规定，该附则为本公约的组成部分。凡引用本公约时，同时也就是引用该附则。

 二、各缔约国承担义务颁布一切必要的法律、法令、命令和规则，并采取一切必要的其它措施，使本公约充分和完全生效，以便从海上人命与财产的安全和保护海洋环境的观点出发，保证船上的海员胜任其职责。

 第二条 定 义

 除另有明文规定者外，就本公约而言：

 一、“缔约国”系指本公约已对之生效的国家；

 二、“主管机关”系指船舶有权悬挂其国旗的缔约国政府；

 三、“证书”系指由主管机关颁发或经主管机关授权颁发或为主管机关所认可的一种有效文件（不论其名称如何），该文件委派其持有人担任该文件中所指定的或国家规章所规定的职务；

 四、“具有了证书的”系指持有恰当的证书；

 五、“组织”系指政府间海事协商组织（海协）；

 六、“秘书长”系指海协组织秘书长；

 七、“海船”系指除了在内陆水域中或者遮蔽水域或港章所适用的区域以内或与此两者紧邻的水域中航行的船舶以外的船舶；

 八、“渔船”系指用于捕捞鱼类、鲸鱼、海豹、海象或其他海洋生物资源的船舶；

 九、“无线电规则”系指附于或被视作附于随时有效的最新国际电信公约的无线电规则。

 第三条 适用范围

 本公约适用于在有权悬挂缔约国国旗的海船上工作的海员，但在下列船上工作的海员不在此例：

 一、军舰、海军辅助舰船或者为国家拥有或营运而只从事于政府的非商业性服务的其他船舶；但是各缔约国应采取无损于其拥有或营运的此类船舶的作业或作业能力的适当措施以保证在此类船上工作的人员，在合理可行的范围内符合本公约的要求；

 二、渔船；

 三、非营业的游艇；或

 四、构造简单的木船。

 第四条 资料交流

 一、各缔约国应尽速将下述资料送交秘书长：

 １． 就本公约范围内各项事宜所颁布的法律、法令、规则及文件的文本；

 ２． 为根据本公约规定所颁发的每一种证书而设置的学习课程内容和期限的详细情况（如适当时）及其国家的考试和其他要求；

 ３． 根据本公约规定所颁发的证书足够数量的样本。

 二、秘书长应将本条第一款第１项所规定的任何资料的收到情况通知所有缔约国，同时为了第九条和第十条的目的，在承索时，特别应将按本条第一款第２项和第３项所送交的资料提供给这些国家。

 第五条 其它条约与解释

 一、缔约国之间现行有效的一切以前的关于海员培训、发证和值班标准的条约、公约及协定，在其有效期间，对以下所述应继续完全和充分有效：

 １． 不适用于本公约的海员；

 ２． 适用于本公约的海员但本公约未予明文规定的事项。

 二、但是，在这些条约、公约或协定与本公约规定相抵触的方面，各缔约国应对其按这些条约、公约及协定所承担的义务重新予以审查，以保证这些义务与其根据本公约所承担的责任不相抵触。

 三、凡本公约中未予明文规定的事项，仍受缔约国法律的约束。

 四、本公约的任何规定，均不得损害根据联合国大会Ｃ（ＸＸＶ）第２７５０号决议召开的联合国海洋法会议对海洋法的编纂和发展，也不得损害任何国家目前和今后就海洋法以及沿海国和船旗国的管辖权的性质和范围所提出的要求和法律上的意见。

 第六条 证 书

 一、船长、高级船员或一般船员的证书，应颁发给按照本公约附则的相应规定、主管机关满意地认为在服务、年龄、健康、训练、资格和考试各方面都符合要求的应试者。

 二、按本条规定发给船长和高级船员的证书，应由发证的主管机关按附则第Ｉ／２条规定的形式予以签证。如所用文字不是英文，则该签注应包括有英文译文。

 第七条 过渡规定

 一、在本公约对某一缔约国生效前，按缔约国法律或无线电规则，对本公约要求具有证书的职位所颁发的适任或职务证书，在本公约对该缔约国生效后，仍应被认为是有效的。

 二、本公约对某一缔约国生效后，其主管机关可继续在不超过五年的期间内，按其过去的做法颁发适任证书。就本公约而言，这种证书应被认为是有效的。在这一过渡期间内，这种证书只应颁发给在本公约对该缔约国生效前业已开始在与这种证书有关的船上特定部门内从事海上工作的海员。主管机关应保证对所有其他要求取得证书的应试者均按本公约的规定进行考试和发证。

 三、在本公约对某一缔约国生效后两年之内，该缔约国可对在本公约对该缔约国生效前既未持有本公约规定的适当证书，也未持有按该缔约国法律颁发的适任证书的海员，颁发职务证书，但这些海员应：

 １． 在本公约对该缔约国生效前的最近七年之内，至少在海上按其所要求取得的职务证书的职位已工作了三年；

 ２． 已提出其令人满意地执行该项职务的证据；

 ３． 已使主管机关参照其申请时的年龄认为健康状况、包括视力和听力均属合格。

 就本公约而言，根据本款规定颁发的职务证书，应视为等同于根据本公约规定所颁发的证书。

 第八条 特 免

 一、在特殊需要的情况下，主管机关如认为对人员、财产和环境不致造成危险时，可颁发特免证明，允许某一指明的海员在某一指明的船上，在为期不超过６个月的指定期间内，担任他并未执有适当证书的职位（除有关的无线电规则所规定者外，无线电报务员和无线电话务员不在此例），但是，被发给这种特免证明的人员，应系主管机关满意地认为能安全地充分胜任其所补空缺者。然而，除在不可抗力的情况下外，对船长或轮机长不得给予特免证明，因而在这种情况下所给予的这种证明其期限应尽可能地短。

 二、凡给予某职位的特免证明，只应发给适当证明可充任仅比该职务低一级职务的人员。如本公约对该项低一级的职位并无证书要求，则可对主管机关认为其资格和经验显然相当于所要充任的职位的要求的人员颁发特免证明，但是，如果该人并未持有相应的证书，则应通过一个主管机关可接受的考试，以表明这种特免证明的颁发是安全的。此外，主管机关应保证尽速由持有相应证书的人员来充任该项职位。

 三、各缔约国应于每年元月一日后，尽速向秘书长送交一份报告，说明一年中间海船所颁发的关于有证书要求的每项职位的特免证明的总数，以及分别说明总吨位在１６００吨以上和以下的这些船舶的艘数。

 第九条 等 效

 一、本公约的规定不应妨碍主管机关保留或采取其它教育和训练的安排，包括涉及专门适应技术上的发展和特种船舶及贸易的水上业务和船上组织的教育和训练的安排，但在船、货航行和技术操作方面，海上服务、知识与效率的水平，应保证并具有至少相当于本公约要求的海上安全程度和防污的效果。

 二、应尽早将这种安排的详情报告秘书长，秘书长则应将这种详情通知所有缔约国。

 第十条 监 督

 一、除第三条所排除的船舶外，船舶在一缔约国的港口时，应受该缔约国正式授权的官员的监督，以核实船上凡公约要求具有证书的海员均持有证书或适当的特免证明。除非有明显的理由认为证书系骗取的或持证人不是该证书原来所发给的本人，否则此类证书应予承认。

 二、在根据第一款或附则第Ｉ／４条“监督程序”的规定发现任何缺陷时，执行监督的官员应以书面通知该船船长及船旗国的领事或（在无领事时）最近的外交代表或海事管理当局，以便采取适当的措施。这种通知应说明所发现的缺陷的细节，以及该缔约国据以判定这些缺陷对人员、财产和环境危险的理由。

 三、在根据第一款的规定执行监督时，如果考虑到船舶的大小和类型以及航程的长短和性质，附则第Ｉ／４条第三款中所述的缺陷未能纠正，并经判定这将对人员、财产或环境构成危险时，执行监督的缔约国应采取措施，务使符合这些要求，从而危险得以消除后，才准其开航。关于所采取的行动的实情，应立即报告秘书长。

 四、在根据本条执行监督时，应尽量避免使船舶受到不适当的扣留或延误。如果船舶受到这种扣留或延误，则该船对于由此而引起的任何损失或损害，有权要求赔偿。

 五、本条规定应根据必要予以施行，以保证不给予有权悬挂非缔约国国旗的船舶以比有权悬挂缔约国国旗的船舶以较为优惠的待遇。

 第十一条 促进技术合作

 一、本公约缔约国应与本组织协商并在本组织的协助下，促进并支持对下述有技术援助要求的缔约国：

 １． 培训行政管理的技术人员；

 ２． 建立海员培训学校；

 ３． 供应培训学校的设备与设施；

 ４． 制订适当的培训计划，包括在海船上的实际训练；

 ５． 促进提高海员资历的其它措施与安排。

 考虑到发展中国家在这方面的特殊需要，这些援助宜以国家、分区或地区为基础，以推进本公约的目的和宗旨。

 二、本组织方面，应根据情况与其他国际组织特别是国际劳工组织进行协商或联合，对以上所述作出努力。

 第十二条 修 正 案

 一、本公约可按下述的任一程序进行修正：

 １． 经本组织内审议后的修正：

 （１）一缔约国提议的任何修正案，应提交给秘书长，然后由秘书长至少在审议此修正案之前六个月分发给本组织所有会员、所有缔约国及国际劳工组织总干事；

 （２）按上述规定提议和周知的任何修正案，应提交给本组织海上安全委员会审议；

 （３）缔约国，不论其是否为本组织的会员，均有权参加海上安全委员会对修正案进行审议和通过的会议；

 （４）修正案应在按本款第（３）项所规定的扩大的海上安全委员会（以下简称为“海上安全委员会扩大会议”）上，以到会并投票的缔约国的２／３多数通过，但在表决时，至少应有１／３的缔约国出席；

 （５）这样通过的修正案，应由秘书长通知所有缔约国，以供接受；

 （６）对于条款的修正案，在其为２／３的缔约国接受之日，即应视为已被接受；

 （７）对于附则的修正案，在下列情况下，应视为已被接受：

 （ｉ）自通知缔约国供其接受之日起满两年时；或

 （ｉｉ）在海上安全委员会扩大会议上通过该修正

 案时经到会并投票的缔约国２／３多数所确定的

 另一期限届满时，但这一期限不得少于一年；

 但是，如果在规定的期间内，有１／３以上的缔约国，或其商船总和不少于世界１００总登记吨及１００总登记吨以上的商船总吨位的５０％的缔约国，通知秘书长反对该修正案，则该修正案应视为未被接受；

 （８）对条款的修正案，对已接受该修正案的各缔约国，应在其视为已被接受之后经过六个月生效；对在该修正案被视为接受之日后接受该修正案的每一缔约国，则应在该缔约国接受之日后经过六个月生效；

 （９）对附则的修正案，应在其视为已被接受之日后过六个月对所有缔约国生效，但按第１项第（７）目的规定对该修正案提出过反对且未曾撤销该项反对的缔约国除外。在规定的生效日期之前，任何缔约国可通知秘书长，在该修正案生效之日起不超过一年的期间内，或在海上安全委员会扩大会议通过该修正案时经到会并投票的缔约国的２／３多数确定的较此为长的期间内，该缔约国免于实施该修正案。

 ２． 会议修正：

 （１）应一个缔约国的请求，并至少有１／３缔约国的同意，本组织应与国际劳工组织总干事联合或与之协商召开一次缔约国会议来审议对本公约的修正案；

 （２）凡由这种会议以到会并投票的缔约国的２／３多数通过的修正案，应由秘书长通知所有缔约国，以供接受；

 （３）除会议另有决定外，该修正案应分别按第１项第（６）目和第（８）目或第１项第（７）目和第（９）目中所规定的程序视为已被接受和生效，但这些项目中所提到的海上安全委员会扩大会议应被认为是指的缔约国政府会议。

 二、对于一项修正案的任何接受或反对的声明，或根据第一款第１项第（９）目所作的任何通知，均应以书面提交给秘书长。秘书长应将此类文件的提交及其收到日期通知所有缔约国。

 三、秘书长应将任何生效的修正案连同每项这种修正案的生效日期通知所有缔约国。

 第十三条 签字、批准、接受、核准和加入

 一、本公约自１９７８年１２月１日起至１９７９年１１月３０日止，在本组织总部开放供签字，此后应继续开放供加入。任何国家可按下列方式参加本公约：

 １． 签字而对批准、接受或核准无保留；或

 ２． 签字而有待批准、接受或核准，随后再予批准、接受或核准；

 ３． 加入。

 二、批准、接受、核准或加入，应向秘书长交存一份相应的文件。

 三、秘书长应将任何签字，或关于批准、接受、核准或加入的任何文件的交存及其交存日期，通知已签字或已加入本公约的所有国家和国际劳工组织总干事。

 第十四条 生 效

 一、本公约应在至少有２５个国家，其商船总和不少于全世界１００总登记吨及１００总登记吨以上的商船总吨的５０％，按第十三条已签字而对批准、接受或核准无保留，或已交存所需的关于批准、接受、核准或加入的文件之后，经过１２个月生效。

 二、秘书长应将本公约的生效日期通知所有已签字或已加入本公约的国家。

 三、凡在第１款所述的１２个月的期间内交存的批准、接受、核准或加入的文件，应在本公约生效之日生效，或在交存上述文件之日起过三个月生效，以较晚者为准。

 四、凡在本公约生效之日后交存的批准、接受、核准或加入的文件，应在交存之日后经过三个月生效。

 五、在修正案根据第十二条规定视为已被接受之日后交存的任何批准、接受、核准或加入的文件，应适用于修正后的公约。

 第十五条 退 出

 一、任何缔约国，在本公约对其生效满五年后，可随时退出本公约。

 二、退出本公约应以书面通知秘书长。秘书长应将收到的任何这种通知和收到日期以及退出的生效日期，通知所有其他缔约国和国际劳工组织总干事。

 三、退出本公约应在秘书长收到退出通知一年后，或该通知中所载明的任何较此为长的期限届满后生效。

 第十六条 保管和登记

 一、本公约应交由秘书长保管，秘书长应将核证无误的本公约副本分发所有已签字或已加入本公约的国家。

 二、本公约一经生效，秘书长应即按照联合国宪章第一百零二条的规定，将本公约文本送联合国秘书长登记并公布。

 第十七条 文 字

 本公约正本一份，用中文、英文、法文、俄文和西班牙文写成，各种文本具有同等效力。应准备有阿拉伯文、德文的正式译本，与签署的正本一并存放。

 下列具名的经各自政府授权的代表，特签署本公约，以昭信守。

 １９７８年７月７日订于伦敦。

 附则

 第一章 总 则

 规则Ｉ／１ 定 义

 除另有明文规定者外，就本公约而言：

 １． “规则”系指公约附件中的规则；

 ２． “认可”系指主管机关的认可；

 ３． “船长”系指指挥一条船的人；

 ４． “高级船员”系指船长以外的由国家法律或规则所指派或在没有这种指派时，由集体协议或习惯法指派的任一船员；

 ５． “驾驶员”系指甲板部合格的高级船员；

 ６． “大副”系指级别仅低于船长的驾驶员，并在船长不能工作时由其指挥船舶；

 ７． “轮机员”系指轮机部的合格的高级船员；

 ８． “轮机长”系指负责船舶机械推进职能的高级轮机员；

 ９． “大管轮”系指级别仅低于轮机长的轮机员，并在轮机长不能工作时由其负责船舶的机械推进；

 １０． “助理轮机员”系指正在培训并将由国家法律或规则指派为轮机员的人；

 １１． “电报员”系指持有一级或二级无线电报员证书或持有按无线电规则规定颁发的水上行动业务无线电通讯报务员一般证书的人，他在国际海上人命安全公约所要求的船上无线电台工作；

 １２． “无线电话务员”系指持有按无线电规则规定颁发的适当的证书者；

 １３． “一般船员”系指船长或高级船员以外的船员；

 １４． “近岸航行”系指缔约国规定的在其附近的航行；

 １５． “推进动力”系指船舶登记证书或其它官方文件上出现的以千瓦计的功率；

 １６． “无线电职责”包括（如为适当时），根据无线电规则、国际海上人命安全公约及由各主管机关自行决定的有关海协建议案中的值班和技术保养及修理；

 １７． “油轮”系指建造成和应用于运载散装石油和石油产品的船舶；

 １８． “化学品船”系指建造成和应用于运载海协“运载散装危险化学品船舶的构造和设备规则”中所列的任何散装液体化学品的船舶；

 １９． “液化气体船”系指建造成和应用于运载海协“运载散装液化气船舶的构造和设备规则”中所列的任何液化气体的船舶。

 规则Ｉ／２ 证书的内容和签证的格式

 一、证书必须用官方语言或发证国语言。如使用的语言不是英语，必须包括英语译文。

 二、关于电报员和无线电话务员，主管机关可：

 １． 包括为签发符合无线电规则要求的证书而举行的考试中所要求的本公约附件有关规则的附加知识；或

 ２． 颁发一张单独的证书，指明证书持有者具有公约附件中所要求的附加知识。

 三、公约第六条所要求的证书签证格式须按下列形式：

 证书签证形式

 －－－－－－－

 证书的签证

（公章） （国家）

 根据１９７８年海员培训、发证和值班标准国际公

约规定发给

 二者选一 （××）政府证明

 本人（以下签字者）证明

 现证书／证书编号：＿＿＿，发给×××（姓

名），

 按１９７８年海员培训、发证和值班标准国际公约

××规则规定，完全有资格作为＿＿＿＿＿＿＿＿，

仅有下列局限：

此处填局限）＿＿＿＿＿＿

 或 ）＿＿＿＿＿

填“无”）＿＿＿＿＿

（如为适当时）

本签证签发日期：＿＿＿＿＿＿

（公章） 签字＿＿＿＿＿

 （正式授权之官员姓名和签字）

持证人出生日期：＿＿＿＿＿＿＿

持证人签字：＿＿＿＿＿＿＿

 规则Ｉ／３ 有关近岸航行的原则

 １． 就本公约而言，任何规定近岸航行的缔约国不得将培训、经验或发证方面的要求强加于在悬挂另一缔约国国旗并从事此类航行的船上服务的海员，以造成对这些船员的要求比在悬挂自己国旗的船上服务的海员更为严格的情况。在任何情况下，此缔约国不得把超过公约中有关从事非近岸航行船舶的要求，强加于在悬挂另一缔约国国旗船上服务的海员。

 ２． 对于悬挂缔约国国旗、航行于另一缔约国海岸附近的定期近岸航行的船舶，其船旗国须为在此种船上服务的海员规定至少相当于船舶所航经的缔约国的培训、经验和发证要求，但这些要求不能超过公约对于非近岸航行的船舶的要求。航行超出一缔约国所规定的近岸航行并进入定义未涉及水域的船舶，须履行公约的要求，不得因本条规定而有所放宽。

 ３． 一缔约国可对有权悬挂其国旗的船舶，在其定期的另一非缔约国海岸附近从事近岸航行时，给予本公约有关近岸航行规定的利益。

 ４． 本规则中的内容在任何情况下都不得限制任何国家的管辖权，不论其是否为缔约国。

 规则Ｉ／４ 监督程序

 一、一个正式授权的监督官员按第十条规定行使的监督应限于下述方面：

 １． 按第十条第一款规定核实所有在船上服务而公约又要求发证的海员都持有有效的证书或有效的特免证明；

 ２． 如果因在一缔约国港内或进入该港时发生了下列情况而有理由认为未能维持值班标准时，判断公约所要求的船上海员维持值班标准的能力情况：

 （１）船舶发生碰撞、搁浅或触礁；或

 （２）船舶在航行、锚泊或靠泊时从船上排放按国际公约规定为非法物质；或

 （３）船舶操作不稳定或不安全或未按航向标志或分道通航制航行。

 二、在按第一款采取的监督活动中发现下列缺陷时，监督官员应按第十条规定，向船长和船旗国相应的代表提出书面情况：

 １． 海员不持有所要求的适当有效的证书或有效的特免证明；

 ２． 未按船旗国规定要求作航海或轮机值班安排；

 ３． 值班中无合格人员操作对安全航行或防污染至为必要的设备；

 ４． 船长在一个航次开始时的值班和其后的接班中未能提供休息好的人员。

 三、未能纠正第二款第１项中所涉缺陷－－有关船长、轮机长和负责航行和轮机值班的高级船员以及（如有关时）电报员的证书问题，以及第二款第２项有关问题，这些将构成一缔约国按第十条规定扣留船舶的唯一依据。

 第二章 船长——甲板部

 规则Ⅱ／１ 航行值班中应遵守的基本原则

 一、缔约国应指示船舶所有人、船舶营运人、船长和值班人员遵守下列原则，以确保在任何时候均能保持安全航行值班。

 二、每艘船舶的船长，必须确保值班的安排适于保持安全航行值班。在船长的统一指挥下，值班驾驶员在他们的值班期间，特别是在关系到避免碰撞和搁浅时，负责船舶的安全航行。

 三、所有船舶必须考虑包括下列、但不限于下列的基本原则。

 四、值班安排

 １． 值班编制在任何时候都必须充分和适应当时的环境和情况，并必须考虑保持正规了望的必要。

 ２． 在决定可能包括合适的甲板部一般船员在内的驾驶台值班编制时，尤其应考虑下列因素：

 （１）在任何时候，驾驶台不许无人看管；

 （２）天气情况、能见度、白天和黑夜；

 （３）临近航行上的危险时，可能需要负责值班的驾驶员执行额外的航行职责；

 （４）助航仪器，如雷达或电子定位仪以及其它影响船舶安全航行的设备的使用和操作条件；

 （５）船上是否装有自动操舵装置；

 （６）由于特殊的操作环境可能产生对航行值班的特别要求。

 五、对职责的适任

 值班制度应使值班驾驶员和值班船员的工作效率，不因疲劳而受影响。值班人员的编排务使航行开始时的第一班及其后的接班人员都能得到充分休息，或使其适任职责即可。

 六、航行

 １． 对预定的航次，应在研究一切有关资料后事先计划，并在启航前对制定的航线进行核对。

 ２． 在值班期间，应使用船上的一切助航仪器，对所驶的航向、船位和航速，通过足够频繁的间隔进行核对，以确保本船沿着计划航线行驶。

 ３． 值班驾驶员应充分了解船上所有安全和航行设备的放置地点和操作方法，并应注意到和考虑到这些设备操作上的局限性。

 ４． 负责航行值班的驾驶员，不应被分配或担负任何妨碍船舶安全航行的职责。

 七、航行设备

 １． 值班驾驶员应最有效地使用在他支配之下的所有航行设备。

 ２． 在使用雷达时，值班驾驶员必须记住，在任何时候都必须遵守适用的海上避碰规则中所载的有关使用雷达的规定。

 ３． 在需要时，值班驾驶员应毫不犹豫地使用舵、主机和音响信号装置。

 八、航行职责

 １． 负责值班的驾驶员应：

 （１）在驾驶台坚持值班，在正式交班之前，无论如何都不得离开驾驶台；

 （２）继续对船舶的安全航行负责，即使船长在驾驶台，直到船长明确地通知他，船长已承担责任并彼此领会时；

 （３）在为了安全而采取某种行动发生疑问时通知船长；

 （４）不向接班驾驶员交班，如果他有理由相信接班驾驶员显然不能有效地履行其职责，在这种情况下，必须据情通知船长。

 ２． 接班驾驶员接班时，应对本船的估计船位或真船位情况表示满意，并证实预定的航迹、航向和航速，还应注意在他值班期间预期可能遇到的任何航行危险。

 ３． 在值班期间，有关本船航行的动态和活动，应作恰当的记录。

 九、了望

 除了为充分判断碰撞、搁浅和其它危害航行安全的危险和情况而保持正规了望外，了望人员的职责还应包括发现遇难的船舶和飞机、船舶遇难人员、沉船和碎片。在执行了望时，应遵守下列各项：

 １． 为保持正规了望，了望应集中精力，并不应承担或被分配给会妨碍本工作的其他职责；

 ２． 了望人员和舵工的职责是分开的。舵工在操舵时不应被视作为了望人员，但在小船上，能在操舵位置上无阻碍地看到周围情况，且不存在夜里视力的减损和执行正规了望的其它障碍时除外。在白天，如在下列各种情况下，负责值班的驾驶员可以是唯一的了望人员：

 （１）已对处境仔细估量，并确信此种做法是安全的；

 （２）已对包括下列但不限于下列的所有因素作了充分考虑：

 ——天气情况

 ——能见度

 ——通航密度

 ——临近的航行危险

 ——当航行在或接近于分道通航制区域时必要的注意；

 （３）当情况发生变化而需要协助时，协助人员能立即应召至驾驶台。

 十、有引航员在船时的航行

 尽管引航员有其职责和义务，他在船上引航并不解除船长或负责值班的驾驶员对船舶安全所负的职责和义务。船长和引航员应交换有关航行方法、当地情况和船舶性能等情况。船长和值班驾驶员应与引航员紧密合作，并保持正确的船舶船位和动态。

 十一、保护海上环境

 船长和负责值班的驾驶员，应了解由于操作不当或意外事故对海上环境污染的严重后果，并应采取一切可能的预防措施，特别应采取有关国际规则和港规规定的预防措施，以防止这类污染。

 规则Ⅱ／２ 对２００总登记吨或以上的船舶的船长和大副发证的法定最低要求

 对１６００总登记吨或以上船舶的船长和大副

 一、每个１６００总登记吨或以上的海船的船长和大副都应持有相应的证书。

 二、每个申请发证的应试者应：

 １． 符合主管机关对体检的要求，特别是视力和听力；

 ２． 符合在２００总登记吨或以上的船舶上负责航行值班的驾驶员的发证要求，并已对该职位具有被认可的海上服务经历：

 （１）大副证书，不少于１８个月；但是，如果主管机关要求特殊培训，而此种培训被视作至少相当于六个月的负责航行值班驾驶员的服务经历的话，则此段时间，可以缩减为不少于１２个月；

 （２）船长证书，不少于３６个月，但是，如果他已具有不少于１２个月的大副海上经历，或如主管机关要求可被视为等同于此种海上经历的特殊培训的话，则此段时间可以缩减为不少于２４个月。

 ３． 已通过使主管机关满意的相应考试。这种考试必须包括本规则附则中规定的材料，除非主管机关认为需要时，才可改变对吨位有限、从事近岸航行船舶的船长和大副的考试要求，但应注意对可能在同一水域航行的所有船舶安全的影响。

 对２００至１６００总登记吨船舶的船长和大副

 三、２００至１６００总登记吨海船的每个船长和大副都应持有相应的证书。

 四、每个申请发证的应试者应：

 １． 符合主管机关对体检的要求，特别是视力和听力；

 ２． （１）大副证书，符合２００总登记吨或以上船舶负责航行值班的驾驶员的发证要求；

 （２）船长证书，符合２００总登记吨或以上船舶负责航行值班的驾驶员的发证要求，并对该职位具有被认可的不少于３６个月的海上经历；但是，如果他已具有不少于１２个月的大副海上经历，或如主管机关要求被视作等同于此种海上经历的特殊培训的话，则此段时间可以缩减为不少于２４个月。

 ３． 已通过使主管机关满意的相应的考试。这种考试必须包括附则中规定的材料，除非主管机关认为合适时，才可改变对从事近岸航行船舶的船长和大副的考试要求，去掉那些不适用于有关水域或船舶的材料，但应注意对可能在同一水域航行的所有船舶安全的影响。通则

 五、在本附则各标题下，所要求的知识水准，可按证书是否发给船长或大副，或证书是否适用于１６００总登记吨及以上的船舶还是２００至１６００总登记吨之间的船舶而有所不同。

 规则Ⅱ／２附则 对２００总登记吨或以上的船舶的船长和大副发证的最低知识要求

 一、下列纲要是为报考２００总登记吨或以上的船舶的船长或大副证书的应试者而编制的。纲要意在扩大和深化规则Ⅱ／４《对２００总登记吨或以上的船舶负责航行值班的驾驶员发证的法定最低要求》内包含的课题。意识到船长对于船舶、旅客、船员和货物的安全负有最高责任，而大副则处于随时承担这种责任的地位，因此，对这些课题的考试是为了考查他们对影响船舶安全的所有情况的融会贯通的能力。

 二、航行和定位

 １． 航次计划和在各种条件下的航行：

 （１）以公认的方法画出远洋航线；

 （２）在受限制的水域内；

 （３）在冰区；

 （４）在能见度不良时；

 （５）在分道通航制区域内；

 （６）在大的潮汐影响区域内。

 ２． 定位：

 （１）包括利用太阳、恒星、月亮和行星的天体观测；

 （２）地文观测，包括通过相应的海图、航海通告和其他航海书籍，结合利用陆标方位及诸如灯塔、航标和浮标等助航设备的能力，以判断最终所得船位的正确性；

 （３）在使用一切现代船舶的电子助航仪器方面，使主管机关满意，尤应扩大对这些仪器的操作原理、局限性、误差来源、误传信息的探测和校正方法等的知识面，以获得正确的船位。

 三、值班

 １． 表明对国际海上避碰规则的内容、应用及其意图，包括附件中有关安全航行方面所具备的全面知识；

 ２． 表明对规则Ⅱ／１《航行值班中应遵守的基本原则》所具备的知识。

 四、雷达设备

 结合雷达模拟器的使用，或无此种设备时，结合运动图的使用，表明对雷达的基本原理和操作与使用雷达的能力，以及理解和分析由此设备获得的信息方面所具备的知识，包括：

 １． 影响性能和精确度的因素；

 ２． 调定和保持显示；

 ３． 误传信息的测试、假回波、海面回波等；

 ４． 距离和方位；

 ５． 危险回波的鉴别；

 ６． 他船的航向和航速；

 ７． 交叉、对遇或追越船的最接近点的时间和距离；

 ８． 他船航向和航速变化的推断；

 ９． 本船航向或航速，或二者兼具的变化所产生的影响；

 １０． 国际海上避碰规则的应用。

 五、罗经、磁罗经和电罗经

 具有测定和校正磁罗经和电罗经误差的能力，以及校正这种误差方法的知识。

 六、气象学和海洋学

 １． 表明在考虑了当地天气的情况下，理解和解释天气图和预测地区天气的能力；

 ２． 具有各种天气体系特性的知识，包括热带飓风及避开风暴中心和危险象限的知识；

 ３． 具有洋流系统的知识；

 ４． 具有使用一切有关潮汐和海流的相应航海书籍的能力，包括英文版本；

 ５． 具有计算潮汐情况的能力。

 七、船舶操纵

 在各种情况下操纵船舶，包括下列情况：

 １． 在接近引航船或引航站时的船舶操纵，特别注意天气、潮汐、淌航距离和冲距等情况；

 ２． 在河道及江河口等处操纵船舶时，注意风流和限制的水域对舵效的影响；

 ３． 浅水中的船舶操纵，包括由于船体下坐、横摇、纵摇的影响而减少龙骨下的富裕水深；

 ４． 在两船会航和船与近岸间的相互作用（运河效应）；

 ５． 在各种不同的风流条件下，用或不用拖轮靠离泊位；

 ６． 锚地选择：在有限锚地内，使用单锚或双锚锚泊以及决定使用锚链长度的有关因素；

 ７． 走锚：清解绞缠的锚链；

 ８． 进干船坞，包括有损坏和无损坏；

 ９． 在恶劣天气下的船舶管理和操纵，包括救助遇难船舶或飞机，进行拖带作业，使失控船舶脱离波谷的方法，减少漂流和镇浪撒油等；

 １０． 在恶劣天气下，施放救生艇或救生筏时船舶操纵的注意事项；

 １１． 从救生艇和救生筏上将遇难人员救上船的方法；

 １２． 具有确定主要类型船舶的操纵和主机特性的能力，特别注意船舶在各种吃水和速度下的冲程和旋回圈；

 １３． 以减速航行避免因本船的艏艉波所造成浪损的重要性；

 １４． 当航行于冰区或船上积冰的情况下，应采取的切实可行的办法；

 １５． 分道通航制的使用和在分道通航制区域内的船舶操纵。

 八、船舶稳性构造和波损控制

 １． 了解船舶构造的基本原理和影响纵倾和稳性的理论和因素，以及保持安全纵倾和稳性的必要措施；

 ２． 在一舱受损并因而浸水时影响船舶纵倾和稳性的知识以及应采取的对策；

 ３． 表明对稳性、纵倾和强度图表以及强度计算仪器的使用，包括为了使船体强度保持在容许限度内的装货和压载方面的知识；

 ４． 船舶主要构件的一般知识和各种部件的正规名称；

 ５． 海协有关船舶稳性建议案的知识。

 九、船舶动力装置

 １． 船用动力装置的工作原理；

 ２． 船舶辅机；

 ３． 船用轮机术语的一般知识。

 十、货物装卸和积载

 １． 船上货物的积载和绑扎，包括起货设备；

 ２． 装卸作业，特别注意重件货物的装卸；

 ３． 有关货物运输的国际规则和建议案，特别是国际海上危险品运输规则（ＩＭＤＧ）；

 ４． 危险货物的运输。装卸作业过程中应采取的预防措施和航行中对危险货物的注意事项；

 ５． 现行有关油轮安全指导准则的内容和应用的实际工作知识；

 ６． 通常使用的货油管系和泵系布置的实际工作知识；

 ７． 用于说明一般货油如原油、中质油、挥发油等特性的术语和定义；

 ８． 防污染规则：压载、洗舱和消除油气作业；

 ９． 污油上装油程序。

 十一、防火和消防设备

 １． 消防演习的组织；

 ２． 火灾的种类及其化学性质；

 ３． 灭火系统；

 ４． 参加认可的消防课程；

 ５． 有关消防设备规则的知识。

 十二、应急措施

 １． 船舶抢滩时注意事项；

 ２． 搁浅前后应采取的措施；

 ３． 在有援助或无援助时起浮搁浅船舶；

 ４． 碰撞后应采取的措施；

 ５． 渗漏的临时堵塞；

 ６． 在紧急情况下，旅客和船员的保护及安全的措施；

 ７． 船舶在发生火灾或爆炸后损害的控制及救护；

 ８． 弃船；

 ９． 应急舵的紧急操作、装配和使用，以及在实际可行时装配应急舵的方法；

 １０． 从遇难船或沉船上救人；

 １１． 救助落水人员的方法。

 十三、医护

 具有使用下列书籍内容的全面知识：

 １． 船用国际医疗指南或国内出版的类似书籍；

 ２． 国际信号规则中的医疗部分；

 ３． 用于危险品事故医疗急救指南。

 十四、海法

 １． 国际协议和公约中包括的有关国际海洋法的知识，因为它们涉及船长的特殊义务和职责，尤其涉及其关于安全和保护海上环境方面的特殊义务和职责。尤应注意下列各项：

 （１）国际公约要求随船携带的证书或其它文件，如何取得这些证件以及这些证件的法定有效期限；

 （２）国际载重线公约有关要求的职责；

 （３）国际海上人命安全公约有关要求的职责；

 （４）国际防止船舶造成污染公约要求的职责；

 （５）航海健康申明书，国际健康规则的要求；

 （６）关于国际海上避碰规则公约要求的职责；

 （７）其它影响船舶、旅客、船员和货物安全的国际文件所要求的职责。

 ２． 国家海上法律的知识程度由主管机关确定，但当包括实施国际协定和公约的国内安排。

 十五、人事管理及培训职责

 船上人事管理、组织和培训的知识。

 十六、通信

 １． 用摩斯灯收发信息和使用国际信号规则的能力；如果应试者在取得较低级别证书时，主管机关已考过他们这些课题，则当他们在报考船长证书时，可有免试的选择。

 ２． 无线电话通信使用程序的知识和使用无线电话的能力、特别是使用有关遇险、紧急、安全和航行的信息方面的能力。

 ３． 无线电规则规定的无线电报应急遇险信号程序知识。

 十七、救生

 具有救生设备规则（国际海上人命安全公约）、组织弃船演习、救生艇、救生筏及其它救生设备的全面知识。

 十八、搜索和救助

 具有海协《商船搜寻救生手册》中的全面知识。

 十九、表明熟习业务的方法

 １． 航行

 表明对六分仪、哑罗经和方位仪的使用以及描绘船位、航向、方位等能力。

 ２． 国际海上避碰规则

 （１）利用小模型显示恰当信号或灯号或航行灯模拟器；

 （２）运动图或雷达模拟器。

 ３． 雷达

 （１）雷达模拟器；或

 （２）运动图

 ４． 消防

 参加认可的消防课程。

 ５． 通信

 视觉和听觉的实际测验。

 ６． 救生

 救生艇和其它救生设备的放落和操纵，包括救生衣的穿着。

 规则Ⅱ／３ 对２００总登记吨以下的船舶的船长和负责航行值班的驾驶员发证的法定最低要求

 一、不从事近岸航行的船舶

 １． 每个在２００总登记吨以下不从事近岸航行的海船上服务的船长应持有为主管机关认可的２００至１６００总登记吨船舶的船长证书。

 ２． 每个在２００总登记吨以下不从事近岸航行的海船上服务的负责航行值班的驾驶员应持有２００总登记吨或以上船舶的相应证书。

 二、从事近岸航行的船舶

 １． 船长

 （１）每个在２００总登记吨以下从事近岸航行的海船上服务的船长应持有相应的证书。

 （２）每个申请发证的应试者应：

 （ｉ）年龄不小于２０岁；

 （ｉｉ）具有被认可的负责航行值班驾驶员不少于１２个月的海上经历并使主管机关满意，具有在有关船上相应于他职责的足够知识，这些知识应包括本规则附则中所列的内容。

 ２． 负责航行值班的驾驶员

 （１）每个在２００总登记吨以下从事近岸航行的海船上负责航行值班的驾驶员，必须持有相应的证书。

 （２）每个申请发证的应试者应：

 （ｉ）年龄不小于１８岁；

 （ｉｉ）符合主管机关对体检的要求，特别是视力和

 听力；

 （ｉｉｉ）使主管机关满意，他已：

 ——成功地经过专门培训，包括主管机关

 所要求的相应的海上服务的足够期限；或

 者

 ——完成被认可的不少于三年在甲板部工

 作的海上经历；

 （ｉｖ）使主管机关满意具有在有关船上相应于他

 职责的足够知识，这些知识包括在附则中

 所列的内容。

 三、培训

 为了完成必要知识和实际经验的培训，必须以规则Ⅱ／１－－《航行值班中应遵守的基本原则》和有关国际规则和建议案为基础。

 四、免除

 主管机关如果认为某一船舶的大小及其航行的条件会使适用于本规则及其附则的全部要求成为不合理或不切实可行时，则可免除对这种船舶或这种船级的船长或负责航行值班驾驶员的某些要求，但应注意对可能在同一水域航行的所有船舶安全的影响。

 规则Ⅱ／３附则 对２００总登记吨以下的船舶船长和负责航行值班的驾驶员发证的最低知识要求

 一、１． 具有下列知识：

 （１）沿海航行并在其要求范围内的天文航海；

 （２）国际海上避碰规则；

 （３）国际海上危险品规则（ＩＭＤＧ）；

 （４）磁罗经；

 （５）无线电话及视觉信号；

 （６）防火和消防设备；

 （７）救生；

 （８）应急措施；

 （９）船舶操纵；

 （１０）船舶稳性；

 （１１）气象；

 （１２）小船动力装置；

 （１３）急救；

 （１４）搜索和救助；

 （１５）防止海上环境的污染。

 ２． 除第１项所列的要求外，还应具有安全地操作装在有关船上的所有助航仪器和设备的足够知识。

 ３． 对第１项和第２项中具体规定所要求的知识水平，应足以使值班驾驶员能安全地执行其职责。

 二、每个在２００总登记吨以下海船上服务的船长，除上述第一款规定的要求以外，还应在具备安全地执行其船长的全部职责的知识方面使主管机关满意。

 规则Ⅱ／４ 对２００总登记吨或以上的船舶负责航行值班的驾驶员发证的法定最低要求

 一、每个在２００总登记吨或以上海船上服务的负责航行值班的驾驶员，必须持有相应的证书。

 二、每个申请发证的应试者应：

 １． 年龄不小于１８岁；

 ２． 符合主管机关的体检要求，特别是视力和听力；

 ３． 具有在甲板部工作不少于三年的认可的海上经历。这段时间应包括在合格驾驶员监督下在驾驶台值班至少六个月的期限；但是，主管机关可以允许以一个特殊培训期限代替不超过二年认可的海上经历，只要该主管机关认为该项培训至少能等同于它所替代的海上经历；

 ４． 通过相应的考试使主管机关确信他具有与其职责相适应的足够的理论和实践知识。

 三、无限航区证书

 为颁发无限航区证书而举行的考试，应考核应试者在本规则附则中所列内容方面是否具有足够的理论和实践知识。

 四、有限航区证书

 为颁发限于近岸航行的证书，主管机关可以删去附则中的下列内容，但应注意对可能在同一水域航行的所有船舶安全的影响：

 １． 天文航海；

 ２． 用电子系统定位以及在无此系统覆盖的水域中的航行。

 五、知识水平

 １． 本附则所列内容所要求的知识水平应足以使值班驾驶员能安全地执行其值班职责。主管机关在决定相适应的知识水平时，应考虑附则中每一内容的说明。

 ２． 为了完成必要的理论知识和实际经验的培训工作，应以规则Ⅱ／１《航行值班中应遵守的基本原则》和有关国际规则及建议案为基础。

 规则Ⅱ／４附则 对２００总登记吨或以上的船舶负责航行值班的驾驶员发证的最 低知识要求

 一、天文航海

 使用天体确定船位和罗经差的能力。

 二、地文和沿海岸航海

 １． 使用下列各项确定船位的能力：

 （１）陆标；

 （２）灯塔、航标和浮标等助航标志；

 （３）考虑风、潮汐、水流和按推进器每分钟转数和按计程仪得到的航速以推算船位。

 ２． 对海图和航海书籍，诸如航路指南、潮汐表、航行通告、无线电航行警告和船舶航路资料等的全面知识和使用能力。

 三、雷达导航

 雷达的基本知识、操作和使用雷达的能力以及理解和分析由雷达获得的信息的能力，包括下列各项：

 １． 影响性能和精确度的因素；

 ２． 调定和保持显示；

 ３． 误传信息的测试，假回波、海面回波等；

 ４． 距离和方位；

 ５． 危险回波的鉴别；

 ６． 他船的航向和速度；

 ７． 交叉、对遇或追越船的最接近点的时间和距离；

 ８． 他船航向和航速变化的推断；

 ９． 本船航向或航速或二者兼具的变化所产生的影响；

 １０． 国际海上避碰规则的应用。

 四、值班

 １、表明对国际海上避碰规则的内容应用及其意图，包括附件中有关安全航行方面所具备的全面知识。

 ２． 表明对规则Ⅱ／１《航行值班中应遵守的基本原则》所具备的知识。

 五、定位和导航电子系统

 具有使用电子导航仪器确定船位的能力并使主管机关满意。

 六、无线电测向仪和回声测深仪

 具有正确地操作这些设备和应用所得资料的能力。

 七、气象学

 具有船用气象仪器和使用这些仪器的知识。各种天气系统的特性，报告程序和记录系统的知识以及运用所据有的气象资料的能力。

 八、罗经——磁罗经和电罗经

 具有磁罗经和电罗经原理、包括其误差及修正方面的知识。关于电罗经，了解在主罗经控制下的每个系统以及主要类型电罗经的操作和注意事项方面的知识。

 九、自动操舵

 具有自动操舵系统和程序的知识。

 十、无线电话和视觉信号

 １． 用摩斯灯收发信息的能力；

 ２． 使用国际信号规则的能力；

 ３． 无线电话通信使用程序的知识和使用无线电话，特别是有关遇险、紧急、安全和航行的信息方面的能力。

 十一、防火和消防设备

 １． 组织消防演习的能力；

 ２． 火灾的种类及其化学性质方面的知识；

 ３． 消防系统的知识；

 ４． 参加认可的消防课程。

 十二、救生

 组织弃船演习的能力和操作救生艇、救生筏、救生浮具及其属具，包括手提式无线电装置和无线电应急示位标等方面的知识。海上救生技术的知识。

 十三、应急措施

 国际劳工组织／海协《指导文件》最新版相应附则中所列项目方面的知识。

 十四、船舶操纵

 具有下列知识：

 １． 不同载重量、吃水、纵倾、航速和龙骨下的水深对旋回圈和冲程的影响；

 ２． 风、流对船舶操作的影响；

 ３． 救助落水人员的操纵；

 ４． 船体下坐、浅水和类似影响；

 ５． 抛锚和带缆的恰当方法。

 十五、船舶稳性

 １． 具有对稳性、纵倾和强度图表和强度计算仪器的应用和操作方面的实际知识；

 ２． 懂得一旦丧失部分完整浮力时应采取的基本行动。

 十六、英语

 足够的英语知识能使驾驶员使用海图和其他航用书籍，了解气象资料和有关船舶安全和操作的信息，并能在和他船或岸台通信中清楚地表达意思。具有了解和使用海协编制的标准航海用语。

 十七、船舶构造

 船舶主要构件的一般知识和各种部件的正规名称。

 十八、货物装卸和积载

 货物的安全装卸和积载的知识及这些因素对船舶安全的影响。

 十九、医疗救护

 医疗指南和无线电指导的实际应用，包括根据这种知识在船上可能发生事故和疾病时采取有效行动的能力。

 二十、搜索和救助

 具有海协《商船搜寻救生手册》所叙述的知识。

 二十一、防止海上环境的污染

 防止海上环境污染应遵守的预防措施方面的知识。

 规则Ⅱ／５ 为确保船长和驾驶员不断精通业务和掌握最新知识的法定最低要求

 一、每个在海上服务或在岸上一段时间后意欲重返海上服务的持有证书的船长和驾驶员，为了继续适于海上服务，要求他在不超过五年的间隔中，符合主管机关的下列要求：

 １． 体检合格，特别是视力和听力；和

 ２． 专业能力

 （１）在前五年期间，至少具有一年认可的船长或驾驶员的海上经历；或

 （２）已完成有关相适应于其所持证书级别职责的职能，而此职能是视为至少等同于第一款第２项第（１）目中所要求的海上经历；或

 （３）具有下列各项之一

 ——通过认可的考核；或

 ——成功地完成了一门认可的课程或几门课程；或

 ——在他担任证书上所授与的职务之前，已在

 作为编外驾驶员职务上具有不少于三个月

 的认可的海上经历。

 二、主管机关应与有关方面协商，为在海上工作，特别是重新上船工作的船长及驾驶员制定或促进一项进修课程和最新课程的设置，按情况既可自愿参加亦可强制参加。主管机关必须确保所作的安排能使所有有关人员参加与他们的经验和职责相适应的这些课程。这些课程应由主管机关认可，并应包括航海技术和有关海上人命安全和海上环境保护的国际规则及建议案的变动。

 三、为了继续在船上从事国际上同意的需经特殊培训的海上工作，每个船长和驾驶员都应成功地完成一项认可的有关培训。

 四、主管机关应确保在其管辖的船舶获得有关海上人命安全和海上环境保护的国际规则的最新修订文本。

 五、一个海员如果在本规则被主管机关批准实施之前的五年中有不少于一年的时间在甲板部工作，他即可被主管机关认为已符合本规则要求。

 规则Ⅱ／６ 对组成航行值班部分的一般船员的法定最低要求

 一、下述第二款规定了２００总登记吨或以上海船上组成航行值班部分的一般船员的要求，这些要求既不是为一水发证规定的要求《除大水有限的船舶外），也不是对成为航行值班中唯一的一般船员所规定的要求。主管机关对于成为航行值班中唯一的一般船员可以提出附加的培训和资格方面的要求。

 二、凡组成２００总登记吨或以上海船航行值班部分的一般船员，应：

 １． 年龄不小于１６岁；

 ２． 符合主管机关对体检的要求，特别是视力和听力；

 ３． 使主管机关满意，他已：

 （１）具有认可的海上经历，包括不少于六个月的、特别与航行值班职责相关的海上经验，或

 （２）成功地在上船前或在船上经过了特殊培训，包括主管机关所要求的不少于两个月的足够的海上经历。

 ４． 具有包括下列各项的经验或训练：

 （１）消防、急救、个人救生技术，人身事故和个人安全的基本原理；

 （２）理解值班驾驶员的命令，并使值班驾驶员理解他所表示的与其职责有关事项的能力；

 （３）操舵和遵照舵令操舵的能力，并具有使能完成这些职责所需的磁罗经和电罗经的足够知识；

 （４）用视觉和听觉保持正规了望，并能以度数、点数报告声号、灯号或其它物标的大致方位的能力；

 （５）熟悉自动操舵和手操舵的相互更换；

 （６）使用相应的船上内部通讯和警报系统的知识；

 （７）烟火求救信号的知识；

 （８）应急职责的知识；

 （９）适应于他职务的船上术语及其定义的知识。

 三、第二款第３项及第４项所要求的经验、经历或训练，可以通过执行与航行值班相关联的职责获得，但这些职责的执行须在船长、负责航行值班的驾驶员或合格的一般船员的直接监督下进行。

 四、主管机关应确保对依照本规则以其经验或训练符合作为组成航行值班部分的一般船员的资格的每个海员发给认可的证件，或者在他现有的证件上作相应的签证。

 五、如果一个海员，他在本公约对其主管机关生效前的五年内有不少于一年的时间已在甲板部担任有关的工作，则该主管机关可以认为他已符合本规则的要求。

 规则Ⅱ／７ 在港值班应遵守的基本原则

 一、在正常的情况下，在港内安全地系泊或安全地锚泊的任何船上，为了安全，船长必须安排保持相应而有效的值班。

 二、在组织值班时，应注意１９７８年海员培训和发证国际会议上通过的《对负责在港值班驾驶员的业务指导及工作原则的建议案》以及《对负责在港值班轮机员的业务指导及工作原则的建议案》的规定。

 规则Ⅱ／８ 在运载危险品船舶上在港值班的法定最低要求

 一、每个运载散装危险品船舶的船长，不论所运载的危险品是或者可能是易爆的、易燃的、有毒的、危害健康的、或污染环境的，应确保指派现有在船的合格的高级船员和一般船员（在合适时）保持安全甲板值班和安全轮机值班，即使当船舶在港安全系泊或安全锚泊时，也应如此。

 二、每个运载非散装的危险品船舶的船长，不论所运载的危险品是或可能是易爆、易燃、有毒、危害健康或污染环境的，应在组织安全值班安排时充分注意到这些危险品的性质、数量、包装和积载以及船上、水面上和岸上的任何特殊情况。

 三、在组织值班时，必须充分注意到１９７８年海员培训和发证国际会议上通过的《对负责在港值班驾驶员的业务指导及工作原则的建议案》以及《对负责在港值班轮机员的业务指导及工作原则的建议案》。

 第三章 轮 机 部

 规则Ⅲ／１ 轮机值班中应遵守的基本原则

 一、缔约国必须指示船舶所有人、船舶营运人、船长、轮机长和值班人员注意遵守下列基本原则，以保证在任何时候都能进行安全轮机值班。

 二、本规则中“值班”一词，既指“组成值班的小组”，也指“轮机员的责任期间”，在此期间，可以要求也可以不要求他亲临机舱。

 三、所有的船舶必须考虑包括下列，但不限于下列的基本原则：

 四、总则

 １． 每条船的轮机长应与船长协商，确保值班的安排适合于保持安全值班，在决定轮机值班组成时，可包括合适的一般轮机人员在内，下列标准应特别予以考虑：

 （１）船舶类型；

 （２）机器类型和状况；

 （３）由于情况的变化如气候、冰区、污染水域、浅水水域、各种应急情况、船损控制或消除污染而采用的特殊操作方法；

 （４）值班船员的资格和经验；

 （５）人命、船舶、货物和港口的安全及环境保护；

 （６）国际、国家和当地规章的遵守；

 （７）保持船舶正常运行。

 ２． 在轮机长的指导下，负责值班的轮机员必须按照要求对他职责范围内的一切机器和设备进行检查、操作和试验；负责值班的轮机员是轮机长的代表，在任何时候，他的主要责任都应是对影响船舶安全的机械设备进行安全有效的使用和保养。

 ３． 轮机长应在与船长协商的情况下，预先确定计划航次的需要，对燃料、淡水、润滑油、化学品、消耗品和其它备件、工具、供应品的需求以及其他任何的需要加以考虑。

 五、操作

 １． 负责值班的轮机员应确保既定的值班安排坚持下去。在他的全面指导之下，必须要求机舱值班的一般船员协助使推进机械和辅助设备得以安全和有效的工作。

 ２． 在轮机值班开始时，应对当时所有机器的运转参数和工作情况加以验证。任何机器如运转失常，预料将发生故障或需特殊处理的情况应和已经采取的措施做出记录。如果需要，应为进一步的措施拟出计划。

 ３． 负责值班的轮机员应保证将主推进装置和辅助系统置于经常的监管之下，对机舱和舵机房应按适当的间隔进行检查，并采取相应的措施来排除已发现的故障。

 ４． 对于需要有人值班的机舱，负责值班的轮机员，随时应能立即操纵推进设备以适应变向和变速的需要。

 对于定期无人值班机舱，指定的负责值班的轮机员，当机舱呼叫照料时，应立即到达。

 ５． 一切驾驶台的命令必须迅速执行。主推进装置的变向和变速应做记录，除非主管机关认为由于个别船舶的特性和大小，使这种记录行不通时，才可不这样做。当人工操作时，负责值班的轮机员应保证在备车或操作状态下，主推进装置的控制器不间断地受到照料。

 ６． 负责值班的轮机员不应再被分派或承担任何可能妨碍他对主推进系统及其附属设备的管理任务，而应保证做到使主推进系统和辅助设备处于经常的监管之下，直至他正式交班为止。

 ７． 应给予一切机器的保养和维护应有的注意，包括机械、电气、液压和空气系统及其控制装置和与此相关的安全设备，一切居住舱室的生活设备以及物料和备品的使用记录。

 ８． 轮机长应保证做到将一切预防保养、船损控制或在值班时进行的修理工作等情况通知负责值班的轮机员。负责值班的轮机员应负责切断、旁通和调整他所管辖的将要操作的一切机器，并将已进行的所有工作记录下来。

 ９． 负责值班的轮机员在下班前，应将一切与主辅机有关的事件相应地记录下来。

 １０． 为使船舶和船员的安全免遭任何威胁，负责值班的轮机员，在发生火警、机舱可能采取导致船舶减速的措施、舵机即将失灵、船舶推进系统停止运转或供电方面发生任何变化或类似威胁安全的情况时立即通知驾驶台。此种通知，如果可能，应在采取行动之前完成，以便驾驶台有最充分的时间采取一切可能的措施避免可能发生的海难。

 １１． 当机舱处于备车状态时，负责值班的轮机员应保证一切在操作时可能用到的机器和设备处于随时可用状态，并使电力有充足的储备，以用于舵机和其它需要。

 六、值班的要求

 １． 值班的每一成员，必须熟悉指派给他的值班职责。此外，每个成员对其船舶应：

 （１）恰当的使用内部通信系统的知识；

 （２）机舱脱险途径的知识；

 （３）机舱报警系统的知识，特别是关于辨别各种警报与二氧化碳警报的能力；

 （４）有关机舱灭火设备的位置和使用的知识。

 ２． 在任何时候航行中的值班组织，应适于确保影响船舶安全运行的所有机器的安全运转，不论是自动还是手动操作，都应适合当时的环境和条件。为此，下列各点应特别予以考虑：

 （１）在任何时候，对影响船舶安全运行的机器都应加以妥善管理；

 （２）遥控推进设备和操舵设备及其控制器的状况和可靠性、控制的位置及程序，包括发生故障或应急时改用人工操作的程序；

 （３）固定的火警控测器、灭火设备或控制火灾的器材的位置和操作方法；

 （４）影响船舶安全航行、系泊或靠泊作业的辅助、备用和应急设备的使用和操作情况；

 （５）保持机器设备正常状态的必要方法和步骤，以保证用各种方法操作船舶时机器能够有效地运转；

 （６）由于特殊操作情况可能引起对值班的任何其他要求。

 ３．在开敞锚地，轮机长应与船长协商是否仍按航行时值班。

 七、对职责的适任

 值班制度不应由于疲劳影响值班工作效率，因此，轮机长在组织值班时，应使航行开始的第一班和其后各班的接班人都能经过充分的休息，或使其适任职责即可。

 八、海上环境保护

 所有轮机员和机舱一般船员均应意识到由于操作或偶然事故所造成的海上环境污染的严重后果，并应对这种污染采取一切可能的措施，特别是要采取有关国际和港口规定的措施。

 规则Ⅲ／２ 主推进动力装置为３０００千瓦或以上的船舶轮机长和大管轮发证的法定最低要求

 一、在主推进动力装置为３０００千瓦或以上海船上的轮机长和大管轮均应持有相应的证书。

 二、应试者应：

 １． 符合主管机关对体检的要求，包括视力和听力；

 ２． 符合取得负责值班的轮机员证书的要求，并

 （１）对于大管轮证书，须有不少于１２个月经认可的轮机员或助理轮机员的海上经历；

 （２）对于轮机长证书，须有不少于３６个月经认可的海上经历，其中担任负责轮机员工作不少于１２个月，同时具备大管轮的资格；

 ３． 参加过认可的消防实习课程；

 ４． 已通过相应的考试，成绩及格并使主管机关满意。这种考试应包括本规则附则所列的内容，除非主管机关认为有必要，对近岸航行、推进动力在限额以下的船舶的轮机员变更对这些考试的要求，但应注意对可能在同一水域航行的所有船舶安全的影响。

 三、为取得必要的理论知识和实际经验的培训工作，应注意有关的国际规定和建议案。

 四、附则各款所要求的知识水准，可根据证书是发给轮机长级或发给大管轮级的实际情况而定。

 规则Ⅲ／２附则 主推进动力装置为３０００千瓦或以上的船舶轮机长和大管轮发证所要求的最低知识

 一、下列纲要是为取得主推进动力装置为３０００千瓦或以上的船舶轮机长或大管轮合格证书的应试者而编写的。注意到大管轮随时可能承担起轮机长的责任，故在拟订这些科目的考试时，应以测验应试者掌握影响船舶机械操作安全的一切有用知识的能力为目的。

 二、关于下面的第四款第１项，主管机关可以删去那些推进机械装置以外的其他机械类型的知识要求，所发的这种证书应是有效的，但以此为依据所发的证书对任何已删去的机械装置类型，在证明该轮机员能胜任这些项目并取得主管机关的满意之前，一律无效。任何这样的局限性应在证书上注明。

 三、所有应试者都应具有下列科目的理论知识：

 １．热力学和传热学；

 ２．力学和流体力学；

 ３．船舶动力装置（柴油、蒸汽和燃汽轮机）和制冷设备的操作原理；

 ４．燃油和润滑油的理化性质；

 ５．材料工艺学；

 ６．火灾和灭火剂的物理和化学性质；

 ７．船舶电气工艺学，电子学和电气设备；

 ８．自动控制基本原理，检测仪表和控制系统；

 ９．造船学和船舶结构，包括船损控制。

 四、所有应试者应至少对下列科目具有足够的实际知识：

 １． 下列机械装置的操作和保养：

 （１）船用柴油机；

 （２）船用蒸汽推进装置；

 （３）船用燃气轮机；

 ２． 辅机的操作和保养，包括泵系和管系，辅锅炉装置和舵机系统；

 ３． 电气和控制设备的操作、测试和保养；

 ４． 起货设备和甲板机械的操作和保养；

 ５． 机器故障的查找，损坏部位的确定和防止损坏的措施；

 ６． 安全保养和修理程序的组织；

 ７． 防火、探火和灭火的设备和方法；

 ８． 防止船舶污染环境的设备和方法；

 ９． 为防止海上环境污染应遵守的规定；

 １０． 海上环境污染的影响；

 １１． 有关在机舱内可能发生的工伤的急救和急救设备的使用；

 １２． 救生设备的作用和使用方法；

 １３． 船损控制的方法；

 １４． 安全操作的实践。

 五、所有应试者都应具有国际协定和公约中体现的国际海法知识，因这些国际协定和公约影响轮机部的特定职责，特别是那些有关安全和海上环境保护方面的职责。国家海事法规知识的范围应为主管机关自行决定，但应包括履行国际协定和公约的国家安排。

 六、所有应试者都应具有人员组织管理和在船上培训的知识。

 规则Ⅲ／３ 主推进动力装置在７５０千瓦和３０００千瓦之间的船舶轮机长和大管轮发证的法定最低要求

 一、主推进动力装置在７５０千瓦和３０００千瓦之间的海船上所有轮机长和大管轮应持有认可的证书。

 二、所有应试者应：

 １． 符合主管机关对体检的要求，包括视力和听力；

 ２． 符合取得负责值班的轮机员证书的要求，并

 （１）对于大管轮证书须有不少于１２个月经认可的轮机员或助理轮机员的海上经历；

 （２）对于轮机长证书，须有不少于２４个月经认可的海上经历，其中担任负责轮机员的工作不少于１２个月，同时具备大管轮的资格。

 ３． 参加过认可的灭火实践课程；

 ４． 已通过相应的考试，成绩及格并使主管机关满意。这种考试应包括本规则附则中所列的内容，除主管机关可能改变对近岸航行船舶的轮机员的考试和海上服务经历的要求，但要注意这种船舶所安装的自动控制和遥控装置的类型以及对可能在同一水域航行的所有船舶安全的影响。

 三、为取得必要的理论知识和实践经验的培训工作，应注意国际规定和建议案。

 四、附则中的不同条款所要求的知识水准可根据证书是发给轮机长级或是发给大管轮级而定。

 五、有资格担任主推进动力装置为３０００千瓦或以上船舶大管轮工作的轮机员，如果有不少于１２个月经认可的负责轮机员的海上经历，可以在主推进动力装置为３０００千瓦以下的船舶上担任轮机长。

 规则Ⅲ／３附则 主推进动力装置在７５０千瓦和３０００千瓦之间的船舶轮机长 和大管轮发证所要求的最低知识

 一、下列纲要是为取得主推进动力装置在７５０千瓦和３０００千瓦之间的船舶轮机长或大管轮合格证书的应试者而编写的。注意到大管轮随时都可能承担起轮机长的责任，故在拟订这些科目的考试时，应以测验应试者掌握影响船舶机械操作安全的一切有用知识的能力为目的。

 二、关于下面的第三款第４项和第四款第１项，主管机关可以删去那些推进机械装置以外的其他机械类型的知识要求，所发的这种证书应是有效的。但以此为依据所发的证书，对任何已删去机械装置类型，在证明该轮机员能胜任这些项目并使主管机关满意之前，一律无效。任何这样的局限性，应在证书中注明。

 三、所有应试者都应具有足够的基本理论知识，以便理解下列科目中的基本原理：

 １． 燃烧过程；

 ２． 传热学；

 ３． 力学和流体力学；

 ４． （１）船用柴油机；

 （２）船用蒸汽推进装置；

 （３）船用燃气轮机。

 ５． 舵机系统；

 ６． 燃油和润滑油的性质；

 ７． 材料性质；

 ８． 灭火剂；

 ９． 船用电气设备；

 １０． 自动装置、测试和控制系统；

 １１． 船舶结构包括船损控制；

 １２． 辅助系统。

 四、所有应试者都应至少对下列科目具备足够的实际知识：

 １． 下列机械的操作和保养：

 （１）船用柴油机；

 （２）船用蒸汽推进装置；

 （３）船用燃气轮机。

 ２． 辅机系统，包括舵机系统的操作和保养；

 ３． 电气和控制设备的操作、测试和保养；

 ４． 装卸货设备和甲板机械的操作和保养；

 ５． 机械故障的查找，损坏部位的确定和防止损坏的措施；

 ６． 修理顺序和安全保养的组织；

 ７． 防火、探火和灭火的设备和方法；

 ８． 应该遵守的关于海上环境污染规定和防止这种污染的方法和设备；

 ９． 有关在机舱内可能发生的工伤的急救知识和急救设备的使用方法；

 １０． 救生设备的作用和使用方法；

 １１． 船损控制的方法，特别是海水进入机舱时应采取的措施；

 １２． 安全操作的实践。

 五、所有应试者都应具有国际协定和公约中体现的国际海商法知识，因这些国际协定和公约影响轮机部的特定职责，特别是那些有关安全和海上环境保护方面的职责。国家海事法规知识的范围，应由主管机关自行决定，但应包括履行国际协定和公约的国家安排。

 六、所有应试者都应具有人员组织管理和在船上培训的知识。

 规则Ⅲ／４ 对传统的有人看守机舱负责值班的轮机员或定期无人看守机舱指派的值班轮机员发证的法定最低要求

 一、所有主机推进动力为７５０千瓦或以上的海船上传统有人看守机舱的值班轮机员或定期无人看守机舱指派的轮机员应持有相应的证书。

 二、每个应试者应：

 １． 年龄不小于１８岁；

 ２． 符合主管机关对体检的要求，包括视力和听力；

 ３． 具有不少于三年与轮机员职责有关的认可的教育或训练；

 ４． 已完成足够时间的海上工作经历，这段经历可包括在第３项所载明的三年时间之内；

 ５． 使主管机关满意他具有与轮机员的职责相适应的操作与保养的理论与实践知识；

 ６． 参加过主管机关认可的消防课程；

 ７． 具有安全操作的实践知识。

 主管机关可改变对近岸航行的主机推进动力在３０００千瓦以下船舶的轮机员关于第３、第４项的要求，但要注意对可能在同一水域航行的一切船舶安全的影响。

 三、所有应试者都应具有操作和保养主辅机的知识，其中包括与规定的要求有关的知识，至少也包括下列规定的各项：

 １． 日常值班

 （１）接班责任；

 （２）值班期间例行职责；

 （３）填写轮机日志和记下读数的意义；

 （４）交班责任。

 ２． 主辅机

 （１）协助主辅机备车工作；

 （２）蒸汽锅炉，包括燃烧系统的操作；

 （３）检查蒸汽锅炉水位的方法以及水位不正常时必须采取的措施；

 （４）查找机舱和锅炉间的机械设备和装置的一般故障及预防损坏的必要措施。

 ３． 泵系

 （１）泵的操作规程；

 （２）舱底水、压舱水和货泵系统的操作。

 ４． 电站

 发电机的备车、起动、并车和转换。

 ５． 安全和应急措施

 （１）值班时须遵守的安全注意事项以及一旦发生火警和发生意外事故时，特别是有关油的系统的事故或火灾时立即采取的措施；

 （２）对电气或其他类型的动力装置和设备，在允许工作人员检修之前，需要对这种动力装置和设备从系统中切断以策安全。

 ６． 防止污染措施

 应遵守防止油、货底、粪便、排烟或其它污染物质对环境污染的事项，防污染设备的使用，包括油水分离器、渣油柜系统、粪便处理装置等。

 ７． 急救

 机舱内可能发生工伤的基本急救方法。

 四、在蒸汽锅炉不构成船舶主辅机的船上，主管机关可删去第三款第２项第（２）和第（３）目所要求的知识。以此为根据所发的证书，对在蒸汽锅炉构成船舶主辅机的船上工作、证明该轮机员能胜任删去的项目所规定的要求并使主管机关满意之前，一律无效。任何这样的局限性应在证书上注明。

 五、取得必要的理论知识和实践经验的培训必须注意有关国际规定和建议案。

 规则Ⅲ／５ 保证轮机员不断精通业务并掌握最新知识的法定最低要求

 一、在海上工作的所有持证轮机员，或在离船上岸一段时间之后欲重返海上工作的持证轮机员，为了继续取得与其证书相应的海上工作职称，须在不超过五年的间隔期限之内，符合主管机关下列要求：

 １． 体检合格；和

 ２． 业务能力：

 （１）在过去五年中，至少有一年认可的轮机员工作的经历；或

 （２）已完成了与所持证书规定的等级相符的职责有关的任务，这至少可以被认为是与第一款第２项第（１）目中所要求的海上经历相等；或

 （３）能做到下列各项之一：

 ——通过认可的测验；或

 ——圆满地修完认可的一门或几门课程；

 ——已完成不少于三个月认可的轮机员海上经

 历，在就任证书职称之前不久，担任过低于

 该证书级别的职务

 二、第一款第２项第（３）目所述一门或几门课程，特别应包括与海上人命安全和海上环境保护有关的国际规则及其变动情况。

 三、主管机关应保证将与海上人命安全和海上环境保护有关的国际规则的最新变动的条文发给其所管辖的船舶。

 规则Ⅲ／６ 对组成机舱值班部分的一般船员的法定最低要求

 一、对组成机舱值班部分的一般船员的最低要求应如第二款所列，这些要求不适用于：

 １． 已提名为负责值班的轮机员的助手的一般船员；

 ２． 正在培训的一般船员；

 ３． 在值班时其职责属非技术性的一般船员。

 二、每个组成机舱值班部分的一般船员应：

 １． 不小于１６岁；

 ２． 符合主管机关对体验的要求，包括视力和听力；

 ３． 满足主管机关下列要求：

 （１）有关消防、基本急救、自救技术、人身事故及人身安全方面的经验或训练；

 （２）在有关他职责内的事务中理解命令和使人理解的能力。

 ４． 符合主管机关要求，他具有：

 （１）主管机关所要求的足够的海上经历来弥补与他海上职务有关的陆上经验；或

 （２）在上船前或在船上受过专门培训，包括主管机关所要求的足够的海上工作经历；或

 （３）至少六个月认可的海上工作经历。

 三、每个这样的一般船员都应具有下列知识：

 １． 机舱值班程序和执行与其职责相适应的日常值班能力；

 ２． 与机舱操作有关的安全工作实际经验；

 ３． 与其职责有关的机舱用语以及机器和设备名称；

 ４． 环境保护的基本措施。

 四、每个指定值锅炉班的一般船员，应具有安全使用锅炉的知识，并应具有保持正确水位和汽压的能力。

 五、所有组成机舱值班部分的一般船员，应熟悉他在该船机舱内值班的任务，尤其应具有与该船有关的；

 １． 使用相应的船内通信系统的知识；

 ２． 机舱脱险途径的知识；

 ３． 机舱警报系统的知识和有分辨不同警报、特别是气体灭火警报的能力；

 ４． 熟悉机舱内消防设备的位置和使用方法。

 六、一个海员，如果在本规则被主管机关批准实施之前的五年中有不少于一年的时间在轮机部工作，他即可被主管机关认为已符合本规则要求。

 第四章 无线电部分

 无线电值班和维修说明：

 关于无线电值班的法定规定，已订入无线电规则；关于安全无线电值班和维修的规定，已订入国际海上人命安全公约和无线电规则，这两种规则日后可能有所修正，但目前仍属有效。关于１９７８年海员培训和发证国际会议所通过的有关决议亦已有所注意。

 规则Ⅳ／１ 无线电报员发证的法定最低要求

 一、 在船上负责或执行无线电职责的每个电报员必须持有按无线电规则的规定、由主管机关颁发或承认的一种或几种适当的证书，并具有足够合格的资历。

 二、 此外，电报员应：

 １． 年龄不小于１８岁；

 ２． 符合主管机关对体检的要求，特别是视力、听力和说话能力；

 ３． 符合本规则附则的要求。

 三、 要求每个应试者必须通过一种或几种考试，并使主管机关满意。

 四、 发征所要求的知识水平，应使电报员足以安全和有效地执行其无线电职责。在确定适当的知识水平和为要取得此种知识和实际能力时所需要的培训，主管机关应考虑无线电规则和本规则附则的要求。主管机关也应考虑１９７８年海员培训和发证国际会议所通过的有关决议案和有关的海协建议案。

 规则Ⅳ／１附则 无线电报员最低附加知识和培训要求

 除符合按照无线电规则颁发证书的要求外，电报员应该具有下述知识和包括实际训练在内的培训：

 １． 无线电应急业务的规定，包括：

 （１）弃船；

 （２）船舶失火；

 （３）电台局部或全部损坏。

 ２． 救生艇、救生筏、救生浮具及其属具，特别是关于便携式和固定式救生艇无线电装置和应急无线电示位标的操作；

 ３． 海上救助；

 ４． 急救；

 ５． 防火和灭火，特别是关于无线电设施的防火和灭火；

 ６． 与船舶和人员安全有关的无线电设备的危害的预防措施，包括电的、辐射的、化学的和机械的危害；

 ７． 海协《商船搜寻救生手册》的使用，特别是其中有关无线电通信部分的使用；

 ８． 船位报告系统和程序；

 ９． 国际信号规则和海协标准航海用语的使用；

 １０． 无线电医疗系统和程序。

 规则Ⅳ／２ 保证无线电报员不断精通业务和掌握最新知识的法定最低要求

 一、 每个持有由主管机关颁发或承认的一种或几种证书的电报员，为了继续取得海上服务的资格，必须符合主管机关的下述要求：

 １． 在每隔不超过五年的时间内，进行体检，体格健康，特别是视力、听力和说话能力；以及

 ２． 专业能力：

 （１）被认可的一个电报员的无线电通信业务，一次中断不得超过五年；

 （２）如发生中断，应在海上或岸上，通过主管机关承认的测验或圆满地完成主管机关批准的（单科或综合的）训练课程，这些课程必须包括的内容是直接关系到海上人命安全和现代化无线电通信设备，也可包括无线电导航设备。

 二、 当有权悬挂其旗帜的船舶采用了新的方法、设备或业务时，该主管机关可以要求无线电报员在海上或岸上通过一次被认可的测验或圆满地完成一次适当的、特别是与安全职责有关的单科或综合训练课程。

 三、 经国际会议通过，在具有特殊培训要求的特种船舶上工作的每个电报员为继续取得海上工作的资格，必须圆满地完成认可的有关培训或考试，这些培训或考试，应该考虑有关的国际规则和建议案。

 四、 主管机关必须保证向它所管辖下的船舶提供有关无线电通信和海上人命安全的国际规则中的最新修改的文本。

 五、 在与有关方面协商下，鼓励主管机关在海上或岸上自愿或强制地（如适当）为现职的，特别是为重返海上服务的电报员制定或促使制订其结构公式化的复习和现代化课程。这些单科与综合的课程应该包括的内容是直接关系到无线电职责和海上无线电通信技术变化和有关的国际规则以及有关海上人命安全的建议案。

 规则Ⅳ／３ 无线电话务员发证的法定最低要求

 一、 在船上负责或执行无线电职责的每个无线电话务员，必须持有在无线电规则的规定下，由主管机关颁发或承认的一种或几种相应的证书。

 二、 此外，在国际海上人命安全公约要求装有无线电话台的船上的无线电话务员，必须：

 １． 年龄不少于１８岁；

 ２． 符合主管机关对体检的要求，特别是视力、听力和说话能力；

 ３． 符合本规则附则的要求。

 三、 要求每个应试者必须通过一种或几种考试，并使有关主管机关满意。

 四、 证书所要求的知识水平，对于无线电话务员完全地和有效地执行其无线电职责应该是足够的。在确定适当的知识水平和为要达到此种知识和实际能力所需的培训时，主管机关必须考虑无线电规则和本规则的附则的要求，主管机关也应考虑１９７８年海员培训和发证国际会议通过的有关决议案和有关的海协建议案。

 规则Ⅳ／３附则 无线电话务员最低附加知识和培训要求

 除符合无线电规则颁发证书的要求外，无线电话务员应具有下述知识和训练，包括实际的训练：

 １． 无线电应急业务的规定，包括：

 （１）弃船；

 （２）船舶失火；

 （３）电台局部或全部损坏。

 ２． 救生艇、救生筏、救生浮具及其属具，特别是关于便携式和固定式救生艇无线电装置和应急无线电示位标的操作；

 ３． 海上救助；

 ４． 急救；

 ５． 防火和灭火，特别是关于无线电设施的防火和灭火；

 ６． 与船舶和人员安全有关的无线电设备的危害的预防措施，包括电的、辐射的、化学的和机械的危害；

 ７． 海协《商船搜寻救生手册》的使用，特别是其中有关无线电通信部分；

 ８． 船位报告系统和程序；

 ９． 国际信号规则和海协标准航海用语的使用；

 １０． 无线电医疗系统和程序。

 第五章 对槽管轮的特别要求

 规则Ⅴ／１ 对油轮船长、高级船员和一般船员的培训和资格的法定最低要求

 一、 在油轮上与货和货运设备有关的、即将负有特殊职责和与那些职责有关的责任，以及那些未曾在油轮上作为正式人员工作过的高级船员和一般船员，在履行这种职责之前，应在岸上完成有关的消防课程，和

 １． 为了获得足够的安全操作实践知识，在船上实习一个适当长的时期；或

 ２． 被认可的油轮业务课程，包括安全基础，防污染措施和方法，不同类型油轮的布局、货的类别，它们的危害性和处理设备，一般的操作顺序及油轮术语。

 二、 船长、轮机长、大副、大管轮和除上述人员以外与装卸和照管运输和处理货油有直接责任的人员，除本规则第一款的规定外，还应：

 １． 有相应于他们在油轮职责的有关经验；和

 ２． 已完成一个与他们职责相适应的专门化的培训项目，包括油轮安全、防火安全措施和系统，防止和控制污染，操作实践以及适用法律和规则的应尽义务。

 三、 缔约国在本公约生效后二年内，如果一个海员在这以前的五年中有不少于一年的时间在油轮上担任有关职务，则可被认为是符合本规则第二款第２项的要求。

 规则Ⅴ／２ 对化学品船船长、高级船员和一般船员的培训和资格的法定最低要求 一、 在化学品船上与货和货运设备有关的、即将负有特殊职责和与那些职责有关的责任以及那些未曾在化学品船上作为正式人员工作过的高级船员和一般船员，在履行这种职责之前，应在岸上完成有关的消防课程，和

 １． 为了获得足够的安全操作实践知识，在船上实习一个适当长的时期；或

 ２． 被认可的化学品船业务课程，包括安全基础、防污染措施和方法，不同类型化学品船的布局、货的类别，它们的危害性和处理设备，一般的操作顺序及化学品船的术语。

 二、 船长、轮机长、大副、大管轮和除上述人员以外与装卸和照管运输和处理货物有直接责任的人员，除本规则第一款的规定外，还必须：

 １． 有相应于他们在化学品船职责的有关经验；和

 ２． 已完成一个与他们职责相适应的专门培训项目，包括化学品船安全、防火安全措施和系统、防止和控制污染、操作实践以及适用法律和规则的应尽义务。

 三、 缔约国在本公约生效后二年之内，如果一个海员在这以前五年中有不少于一年的时间在化学品船上担任有关职务，则可被认为是符合本规则第二款第２项的要求。

 规则Ⅴ／３ 对液化气体船船长、高级船员和一般船员的培训和资格的法定最低要求

 一、 在液化气体船上与货和货运设备有关的、即将负有特殊职责和与那些职责有关的责任，以及那些未曾在液化气体船上作为正式人员工作过的高级船员和一般船员，在履行这种职责之前，应在岸上完成有关的消防课程，和

 １． 为了获得足够的安全操作实践知识，在船上实习一个适当长的时期；或

 ２． 被认可的液化气体船业务课程，包括安全基础、防污染措施和方法，不同液化气体船的布局、货的类别，它们的危害性和处理设备，一般的操作顺序和液化气体船的术语。

 二、 船长、轮机长、大副、大管轮和除上述人员之外与装卸和照管运输和处理货物有直接责任的人员，除本规则第一款的规定外，还应：

 １． 有相应于他们在液化气体船职责的有关经验；和

 ２． 已完成一个与他们职责相适应的专门培训项目，包括液化气体船的安全、防火安全措施和系统，防止和控制污染，操作实践以及适用法律和规则的应尽义务。

 三、 缔约国在本公约生效后的二年之内，如果一个海员在这以前的五年中，有不少于一年的时间在液化气体船上担任有关职务，则可被认为是符合本规则第二款第２项的要求。

 第六章 精通救生艇业务

 规则Ⅵ／１ 关于颁发精通救生艇业务证书的法定最低要求

 每个发给精通救生艇业务证书的海员应：

 一、 年龄不小于１７岁半；

 二、 符合主管机关对体检的要求；

 三、 不少于１２个月已认可的海上经历或参加过认可的训练课程与不少于九个月认可的海上经历；

 四、 考试或在认可的训练课程中经常性考核使主管机关满意，即他已具有本规则附则所列内容的知识；

 五、 通过考试或在认可的训练课程中的经常性考核，使主管机关满意，表明他已具有下列能力：

 １． 正确地穿着救生衣；从高处安全地跳入水中；穿着救生衣从水中登上救生艇；

 ２． 穿着救生衣扶正一个倾覆的救生筏；

 ３． 说出救生艇上所标的额定乘员数；

 ４． 对救生艇筏的放落、登乘、驶离大船、操纵和人员离艇作出所要求的正确指挥；

 ５． 准备放艇并安全地放艇入水，迅速地驶离大船船边；

 ６． 在弃船过程中和弃船后处理受伤人员；

 ７． 划桨及操舵、竖桅、升帆、用帆和依罗经操舵时管理救生艇；

 ８． 使用信号设备，包括烟火；

 ９． 使用救生艇用的便携式无线电设备。

 规则Ⅵ／１附则 颁发精通救生艇业务证书的最低知识要求

 一、 可能发生的紧急情况类别，如碰撞、失火、沉没。

 二、 救生原则包括：

 １． 训练和操练的意义；

 ２． 必须随时准备好应付任何紧急情况；

 ３． 当召唤至放救生艇处时应采取的行动；

 ４． 当要求弃船时应采取的行动；

 ５． 在水中应采取的行动；

 ６． 在救生艇上应采取的行动；

 ７． 对生还者的主要危险。

 三、 分配给注明在集合名单中各个船员的专门职责，包括召集所有船员到救生艇或失火场所两种信号不同的部署。

 四、 通常配备于船上的救生设备的种类。

 五、 救生艇的构造和装备及其设备的各个细目。

 六、 救生艇的特殊性能和设备。

 七、 用于放落救生艇的吊艇柱的各种类型。

 八、 将救生艇放到大风浪海面的方法。

 九、 离大船后应采取的行动。

 十、 在恶劣天气下操纵救生艇筏。

 十一、 索具、海锚及所有其他设备的使用。

 十二、 救生艇上食品和淡水的分配。

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 十五、 带在救生艇上的无线电设备，包括应急无线电示位标。

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 INTERNATIONAL CONVENTION ON STANDARDS OF TRAINING, CERTIFICATIONAND WATCHKEEPING FOR SEAFARERS, 1978

 Whole document

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INTERNATIONAL CONVENTION ON STANDARDS OF TRAINING, CERTIFICATION AND

WATCHKEEPING FOR SEAFARERS, 1978

 The Parties to this Convention,

 Desiring to promote safety of life and property at sea and the

protection of the marine environment by establishing in common agreement

international standards of training, certification and watchkeeping for

seafarers,

 Considering that this end may best be achieved by the conclusion of an

International Convention on Standards of Training, Certification and

Watchkeeping for Seafarers,

 Have agreed as follows:

 Article I General Obligations under the Convention

 (1) The Parties undertake to give effect to the provisions of the

Convention and the Annex thereto, which shall constitute an integral part

of the Convention. Every reference to the Convention constitutes at the

same time a reference to the Annex.

 (2) The Parties undertake to promulgate all laws, decrees, orders and

regulations and to take all other steps which may be necessary to give the

Convention full and complete effect, so as to ensure that, from the point

of view of safety of life and property at sea and the protection of the

marine environment, seafarers on board ships are qualified and fit for

their duties.

 Article II Definitions

 For the purpose of the Convention, unless expressly provided

otherwise:

 (a) "Party" means a State for which the Convention has entered

into force;

 (b) "Administration" means the Government of the Party whose flag

the ship is entitled to fly;

 (c) "Certificate" means a valid document, by whatever name it may

be known, issued by or under the authority of the Administration or

recognized by the Administration authorizing the holder to serve as stated

in this document or as authorized by national regulations;

 (d) "Certificated" means properly holding a certificate;

 (e) "Organization" means the Inter-Governmental Maritime

Consultative Organization (IMCO);

 (f) "Secretary-General" means the Secretary-General of the

Organization;

 (g) "Sea-going ship" means a ship other than those which navigate

exclusively in inland waters or in waters within, or closely adjacent to,

sheltered waters or areas where port regulations apply;

 (h) "Fishing vessel" means a vessel used for catching fish,

whales, seals, walrus or other living resources of the sea;

 (i) "Radio Regulations" means the Radio Regulations annexed to, or

regarded as being annexed to, the most recent International

Telecommunication Convention which may be in force at any time.

 Article III Application

 The Convention shall apply to seafarers serving on board sea-going

ships entitled to fly the flag of a Party except to those serving on

board:

 (a) warships, naval auxiliaries or other ships owned or operated

by a State and engaged only on governmental non-commercial service;

however, each Party shall ensure by the adoption of appropriate measures

not impairing the operations or operational capabilities of such ships

owned or operated by it, that the persons serving on board such ships meet

the requirements of the Convention so far as is reasonable and

practicable;

 (b) Fishing vessels;

 (c) pleasure yachts not engaged in trade; or

 (d) wooden ships of primitive build.

 Article IV Communication of Information

 (1) The Parties shall communicate as soon as practicable to the

Secretary-General:

 (a) the text of laws, decrees, orders, regulations and instruments

promulgated on the various matters within the scope of the Convention;

 (b) full details, where appropriate, of contents and duration of

study courses, together with their national examination and other

requirements for each certificate issued in compliance with the

Convention;

 (c) a sufficient number of specimen certificates issued in

compliance with the Convention.

 (2) The Secretary-General shall notify all Parties of the receipt of

any communication under paragraph (1) (a) and, inter alia, for the

purposes of Articles IX and X, shall, on request, provided them with any

information communicated to him under paragraphs (1) (b) and (c).

 Article V Other Treaties and Interpretation

 (1) All prior treaties, conventions and arrangements relating to

standards of training, certification and watchkeeping for seafarers in

force between the Parties, shall continue to have full and complete effect

during the terms thereof as regards:

 (a) seafarers to whom this Convention does not apply;

 (b) seafarers to whom this Convention applies, in respect of

matters for which it has not expressly provided.

 (2) To the extent, however, that such treaties, conventions or

arrangements conflict with the provisions of the Convention, the Parties

shall review their commitments under such treaties, conventions and

arrangements with a view to ensuring that there is no conflict between

these commitments and their obligations under the Convention.

 (3) All matters which are not expressly provided for in the Convention

remain subject to the legislation of Parties.

 (4) Nothing in the Convention shall prejudice the codification and

development of the law of the sea by the United Nations Conference on the

Law of the Sea convened pursuant to resolution 2750 C (XXV) of the General

Assembly of the United Nations, nor the present or future claims and legal

views of any State concerning the law of the sea and the nature and extent

of coastal and flag State jurisdiction.

 Article VI Certificates

 (1) Certificates for masters, officers or ratings shall be issued to

those candidates who, to the satisfaction of the Administration, meet the

requirements for service, age, medical fitness, training, qualification

and examinations in accordance with the appropriate provisions of the

Annex to the Convention.

 (2) Certificates for masters and officers, issued in compliance with

this Article, shall be endorsed by the issuing Administration in the form

as prescribed in Regulation I/2 of the Annex. If the language used is not

English, the endorsement shall include a translation into that language.

 Article VII Transitional Provisions

 (1) A certificate of competency or of service in a capacity for which

the Convention requires a certificate and which before entry into force of

the Convention for a Party is issued in accordance with the laws of that

Party or the Radio Regulations, shall be recognized as valid for service

after entry into force of the Convention for that Party.

 (2) After the entry into force of the Convention for a Party, its

Administration may continue to issue certificates in competency in

accordance with its previous practices for a period not exceeding five

years. Such certificates shall be recognized as valid for the purpose of

the Convention. During this transitional period such certificates shall be

issued only to seafarers who had commenced their sea service before entry

into force of the Convention for that Party within the specific ship

department to which those certificates relate. The Administration shall

ensure that all other candidates for certification shall be examined and

certificated in accordance with the Convention.

 (3) A Party may, within two years after entry into force of the

Convention for that Party, issue a certificate of service to seafarers

who hold neither an appropriate certificate under the Convention nor a

certificate of competency issued under its laws before entry into force of

the Convention for that Party but who have:

 (a) served in the capacity for which they seek a certificate of

service for not less than three years at sea within the last seven years

preceding entry force of the Convention for that Party;

 (b) produced evidence that they have performed that service

satisfactorily;

 (c) satisfied the Administration as to medical fitness, including

eyesight and hearing, taking into account their age at the time of

application.

 For the purpose of the Convention, a certificate of service issued

under this paragraph shall be regarded as the equivalent of a certificate

issued under the Convention.

 Article VIII Dispensation

 (1) In the circumstances of exceptional necessity, Administrations, if

in their opinion this does not cause danger to persons, property or the

environment, may issue a dispensation permitting a specified seafarer to

serve in a specified ship for a specified period not exceeding six months

in a capacity, other than that of the radio officer or radiotelephone

operator, except as provided by the relevant Radio Regulations, for which

he does not hold the appropriate certificate, provided that the person to

whom the dispensation is issued shall be adequately qualified to fill the

vacant post in a safe manner, to the satisfaction of the Administration.

However, dispensations shall not be granted to a master or chief engineer

officer, except in circumstances of force majeure and then only for the

shortest possible period.

 (2) Any dispensation granted for a post shall be granted only to a

person properly certificated to fill the post immediately below. Where

certification of the post below is not required by the Convention, a

dispensation may be issued to a person whose qualification and experience

are, in the opinion of the Administration, of a clear equivalence to the

requirements for the post to be filled, provided that, if such a person

holds no appropriate certificate, he shall be required to pass a test

accepted by the Administration as demonstrating that such a dispensation

may safely be issued. In addition, Administrations shall ensure that the

post in question is filled by the holder of an appropriate certificate as

soon as possible.

 (3) Parties shall, as soon as possible after January 1 of each year,

send a report to the Secretary-General giving information of the total

number of dispensations in respect of each capacity for which a

certificate is required that have been issued during the year to sea-going

ships, together with information as to the numbers of those ships above

and below 1 600 gross register tons respectively.

 Article IX Equivalents

 (1) The Convention shall not prevent an Administration from retaining

or adopting other educational and training arrangements, including those

involving sea-going service and shipboard organization especially adapted

to technical developments and to special types of ships and trades,

provided that the level of sea-going service, knowledge and efficiency as

regards navigational and technical handling of ship and cargo ensures a

degree of safety at sea and has a preventive effect as regards pollution

at least equivalent to the requirements of the Convention.

 (2) Details of such arrangements shall be reported as early as

practicable to the Secretary-General who shall circulate such particulars

to all Parties.

 Article X Control

 (1) Ships, except those excluded by Article III, are subject, while in

the ports of a Party, to control by officers duly authorized by that

Party to verify that all seafarers serving on board who are required to be

certificated by the Convention are so certificated or hold an appropriate

dispensation. Such certificates shall be accepted unless there are clear

grounds for believing that a certificate has been fraudulently obtained or

that the holder of a certificate is not the person to whom that

certificate was originally issued.

 (2) In the event that any deficiencies are found under paragraph (1)

or under the procedures specified in Regulation I/4-"Control Procedures",

the officer carrying out the control shall forthwith inform, in writing,

the master of the ship and the Consul or, in his absence, the nearest

diplomatic representative or the maritime authority of the State whose

flag the ship is entitled to fly, so that appropriate action may be taken.

Such notification shall specify the details of the deficiencies found and

the grounds on which the Party determines that these deficiencies pose a

danger to persons, property or the environment.

 (3) In exercising the control under paragraph (1) if, taking into

account the size and type of the ship and the length and nature of the

voyage, the deficiencies referred to in paragraph 3 of Regulation I/4 are

not corrected and it is determined that this fact poses a danger to

persons, property or the environment, the Party carrying out the control

shall take steps to ensure that the ship will not sail unless and until

these requirements are met to the extent that the danger has been removed.

The facts concerning the action taken shall be reported promptly to the

Secretary-General.

 (4) When exercising control under this Article, all possible efforts

shall be made to avoid a ship being unduly detained or delayed. If a ship

is so detained or delayed it shall be entitled to compensation for any

loss or damage resulting therefrom.

 (5) This Article shall be applied as may be necessary to ensure that

no more favourable treatment is given to ships entitled to fly the flag of

a non-Party than is given to ships entitled to fly the flag of a Party.

 Article XI Promotion of Technical Co-operation

 (1) Parties to the Convention shall promote, in consultation with, and

with the assistance of, the Organization, support for those Parties which

request technical assistance for:

 (a) training of administrative and technical personnel;

 (b) establishment of institutions for the training of seafarers;

 (c) supply of equipment and facilities for training institutions;

 (d) development of adequate training programmes, including

practical training on sea-going ships; and

 (e) facilitation of other measures and arrangements to enhance the

qualifications of seafarers;

 preferably on a national, sub-regional or regional basis, to further

the aims and purposes of the Convention, taking into account the special

needs of developing countries in this regard.

 (2) On its part, the Organization shall pursue the aforesaid efforts,

as appropriate, in consultation or association with the other

international organizations, particularly the International Labour

Organisation.

 Article XII Amendments

 (1) The Convention may be amended by either of the following

procedures:

 (a) amendments after consideration within the Organization:

 (i) any amendment proposed by a Party shall be submitted to

the Secretary-General, who shall then circulate it to all Members of the

Organization, all Parties and the Director-General of the International

Labour Office at least six months prior to its consideration;

 (ii) any amendment so proposed and circulated shall be

referred to the Maritime Safety Committee of the Organization for

consideration;

 (iii) Parties, whether or not Members of the Organization,

shall be entitled to participate in the proceedings of the Maritime Safety

Committee for consideration and adoption of amendments;

 (iv) amendments shall be adopted by a two thirds majority of

the Parties present and voting in the Maritime Safety Committee expanded

as provided for in sub-paragraph (a) (iii) (hereinafter referred to as the

"expanded Maritime Safety Committee") on condition that at least one

third of the Parties shall be present at the time of voting;

 (v) amendments so adopted shall be communicated by the

Secretary-General to all Parties for acceptance;

 (vi) an amendment to an Article shall be deemed to have been

accepted on the date on which it is accepted by two thirds of the Parties;

 (vii) an amendment to the Annex shall be deemed to have been

accepted:

 1. at the end of two years from the date on which it is

communicated to Parties for acceptance; or

 2. at the end of a different period, which shall be not

less than one year, if so determined at the time of its adoption by a two

thirds majority of the Parties present and voting in the expanding

Maritime Safety Committee; however, the amendments shall be deemed not to

have been accepted if within the specified period either more than one

third of Parties, or Parties the combined merchant fleets of which

constitute not less than fifty per cent of the gross tonnage of the

world\'s merchant shipping of ships of 100 gross register tons or more,

notify the Secretary-General that they object to the amendment;

 (viii) an amendment to an Article shall enter into force with

respect to those Parties which have accepted it, six months after the date

on which it is deemed to have been accepted, and with respect to each

Party which accepts it after that date, six months after the date of that

Party\'s acceptance;

 (ix) an amendment to the Annex shall enter into force with

respect to all Parties, except those which have objected to the amendment

under sub-paragraph (a) (vii) and which have not withdrawn such

objections, six months after the date on which it is deemed to have been

accepted. Before the date determined for entry into force, any Party may

give notice to the Secretary-General that it exempts itself from giving

effect to that amendment for a period not longer than one year from the

date of its entry into force, or for such longer period as may be

determined by a two thirds majority of the Parties present and voting in

the expanded Maritime Safety Committee at the time of the adoption of the

amendment; or

 (b) amendment by a conference:

 (i) upon the request of a Party concurred in by at least one

third of the Parties, the Organization shall convene, in association or

consultation with the Director-General of the International Labour Office,

a conference of Parties to consider amendments to the Convention;

 (ii) every amendment adopted by such a conference by a two

thirds majority of the Parties present and voting shall be communicated by

the Secretary-General to all Parties for acceptance;

 (iii) unless the conference decides otherwise, the amendment

shall be deemed to have been accepted and shall enter into force in

accordance with the procedures specified in sub-paragraphs (a) (vi) and

(a) (viii) or sub-paragraphs (a) (vii) and (a) (ix) respectively,

provided that references in these sub-paragraphs to the expanded Maritime

Safety Committee shall be taken to mean references to the conference.

 (2) Any declaration of acceptance of, or objection to, an amendment or

any notice given under paragraph (1) (a) (ix) shall be submitted in

writing to the Secretary-General, who shall inform all Parties of any such

submission and the date of its receipt.

 (3) The Secretary-General shall inform all Parties of any amendments

which enter into force, together with the date on which each such

amendment enters into force.

 Article XIII Signature, Ratification, Acceptance, Approval and Ac-cession

 (1) The Convention shall remain open for signature at the Headquarters

of the Organization from December 1, 1978 until November 30, 1979 and

shall thereafter remain open for accession. Any State may become a Party

by:

 (a) signature without reservation as to ratification, acceptance

or approval; or

 (b) signature subject to ratification, acceptance or approval,

followed by ratification, acceptance or approval; or

 (c) accession.

 (2) Ratification, acceptance, approval or accession shall be effected

by the deposit of an instrument to that effect with the Secretary-General.

 (3) The Secretary-General shall inform all States that have signed the

Convention or acceded to it and the Director-General of the International

Labour Office of any signature or of the deposit of any instrument or

ratification, acceptance, approval or accession and the date of its

deposit.

 Article XIV Entry into Force

 (1) The Convention shall enter into force twelve months after the date

on which not less than twenty-five States, the combined merchant fleets of

which constitute not less than fifty per cent of the gross tonnage of the

world\'s merchant shipping of ships of 100 gross register tons or more,

have either signed it without reservation as to ratification, acceptance

or approval or deposited the requisite instruments of ratification,

acceptance, approval or accession in accordance with Article XIII.

 (2) The Secretary-General shall inform all States that have signed the

Convention or acceded to it of the date on which it enters into force.

 (3) Any instrument of ratification, acceptance, approval or accession

deposited during the twelve months referred to in paragraph (1) shall take

effect on the coming into force of the Convention or three months after

the deposit of such instrument, whichever is the later date.

 (4) Any instrument of ratification, acceptance, approval or accession

deposited after the date on which the Convention enters into force shall

take effect three months after the date of deposit.

 (5) After the date on which an amendment is deemed to have been

accepted under Article XII, any instrument of ratification, acceptance,

approval or accession deposited shall apply to the Convention as amended.

 Article XV Denunciation

 (1) The Convention may be denounced by any Party at any time after

five years from the date on which the Convention entered into force for

that Party.

 (2) Denunciation shall be effected by notification in writing to the

Secretary-General who shall inform all other Parties and the

Director-General of the International Labour Office of any such

notification received and of the date of its receipt as well as the date

on which such denunciation takes effect.

 (3) A denunciation shall take effect twelve months after receipt of

the notification of denunciation by the Secretary-General or after any

longer period which may be indicated in the notification.

 Article XVI Deposit and Registration

 (1) The Convention shall be deposited with the Secretary-General who

shall transmit certified true copies thereof to all States that have

signed the Convention or acceded to it.

 (2) As soon as the Convention enters into force, the Secretary-General

shall transmit the text to the Secretary-General of the United Nations for

registration and publication, in accordance with Article 102 of the

Charter of the United Nations.

 Article XVII Languages

 The Convention is established in a single copy in the Chinese,

English, French, Russian and Spanish languages, each text being equally

authentic. Official translations in the Arabic and German languages shall

be prepared and deposited with the signed original.

 IN WITNESS WHEREOF the undersigned \*, being duly authorized by their

respective Governments for that purpose, have signed the Convention.

 [\* Signatures omitted.]

 DONE AT LONDON this seventh day of July, one thousand nine hundred and

seventy-eight.

 ANNEX

 CHAPTER I. GENERAL PROVISIONS

 Regulation I/1 Definitions

 For the purpose of this Convention, unless expressly provided

otherwise:

 (a) "Regulations" means Regulations contained in the Annex to the

Convention;

 (b) "Approved" means approved by the Administration;

 (c) "Master" means the person having command of a ship;

 (d) "Officer" means a member of the crew, other than the master,

designated as such by national law or regulations or in the absence of

such designation by collective agreement or custom;

 (e) "Deck officer" means a qualified officer in the deck

department;

 (f) "Chief mate" means the deck officer next in rank to the master

and upon whom the command of the ship will fall in the event of the

incapacity of the master;

 (g) "Engineer officer" means a qualified officer in the engine

department;

 (h) "Chief engineer officer" means the senior engineer officer,

responsible for the mechanical propulsion of the ship;

 (i) "Second engineer officer" means the engineer officer next in

rank to the chief engineer officer and upon whom the responsibility for

the mechanical propulsion of the ship will fall in the event of the

incapacity of the chief engineer officer;

 (j) "Assistant engineer officer" means a person under training to

become an engineer officer and designated as such by national law or

regulations;

 (k) "Radio officer" means a person holding a first class or second

class radiotelegraph operator\'s certificate or a radiocommunication

operator\'s general certificate for the maritime mobile service issued

under the provisions of the Radio Regulations, who is employed in the

radiotelegraph station of a ship which is required to have such a station

by the International Convention for the Safety of Life at Sea;

 (l) "Radiotelephone operator" means a person holding an

appropriate certificate issued under the provisions of the Radio

Regulations;

 (m) "Rating" means a member of the ship\'s crew other than the

master or an officer;

 (n) "Near-coastal voyages" means voyages in the vicinity of a

Party as defined by that Party;

 (o) "Propulsion power" means the power in kilowatts which appears

on the ship\'s Certificate of Registry or other official document \*;

 [\* It is assumed that the power so appearing on the Certificate of

Registry or other official document is the total maximum continuous rated

output power of all the ship\'s main propulsion machinery.]

 (p) "Radio duties" include, as appropriate, watchkeeping and

technical maintenance and repairs in accordance with the Radio

Regulations, the International Convention for the Safety of Life at Sea

and, at the discretion of each Administration, the relevant IMCO

recommendations;

 (q) "Oil tanker" means a ship constructed and used for the

carriage of petroleum and petroleum products in bulk;

 (r) "Chemical tanker" means a ship constructed and used for the

carriage in bulk of any liquid chemical listed in the IMCO "Code for the

Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk".

 (s) "Liquefied gas tanker" means a ship constructed and used for

the carriage in bulk of any liquefied gas listed in the IMCO "Code for the

Construction and Equipment of Ships carrying Liquefied Gases in Bulk".

 Regulation I/2 Content of Certificates and Form of Endorsement

 1. Certificates shall be in the official language or languages of the

issuing country. If the language used in not English, the text shall

include a translation into that language.

 2. In respect of radio officers and radiotelephone operators,

Administrations may:

 (a) include the additional knowledge required by the relevant

Regulations of the Annex to the Convention in the examination for the

issue of a certificate complying with the Radio Regulations; or

 (b) issue a separate certificate indicating that the holder has

the additional knowledge required by the Annex to the Convention.

 3. The form of certificate endorsement required by Article VI of the

Convention shall be as follows: Form of Endorsement of Certificates

ENDORSEMENT OF CERTIFICATES (Official Seal)

(Country) Issued under the provisions of the

INTERNATIONAL CONVENTION ON STANDARDS OF TRAINING, CERTIFICATION AND

WATCHKEEPING FOR SEAFARERS, 1978

 The Government of (Name) certifies Either\*\*

{-----------------------------------

 I, the undersigned certify

 [\*\* Use one line or the other.]

 that the present Certificate/Certificate No \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\*\*\*, is

issued to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(full name of person), who has been found

duly qualified in accordance with the provisions of Regulation\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_of the International Convention on Standards of Training,

Certification and Watchkeeping for Seafarers, 1978, as

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\* with the following limitations only:

 [\*\*\* Delete as appropriate.]

 [\* Insert Convention grade or class of Certificate.] Insert here

limitations \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_ or "none" as}\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ appropriate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date of issue of this endorsement:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Signed\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_ (Official Seal) (Name and

signature of duly authorized official) Date of birth of the holder of the

Certificate\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Signature of the holder

of the Certificate\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Regulation I/3 Principles Governing Near-Coastal Voyages

 1. Any Party defining near-coastal voyages for the purpose of the

Convention shall not impose training, experience or certification

requirements on the seafarers serving on board the ships entitled to fly

the flag of another Party and engaged on such voyages in a manner

resulting in more stringent requirements for such seafarers than for

seafarers serving on board ships entitled to fly its own flag. In no case

shall any such Party impose requirements in respect of seafarers serving

on board ships entitled to fly the flag of another Party in excess of

those of the Convention in respect of ships not engaged on near-coastal

voyages.

 2. With respect to ships entitled to fly the flag of a Party regularly

engaged on near-coastal voyages off the coast of another Party, the Party

whose flag the ship is entitled to fly shall prescribe training,

experience and certification requirements for seafarers serving on such

ships at least equal to those of the Party off whose coast the ship is

engaged, provided that they do not exceed the requirements of the

Convention in respect of ships not engaged on near-coastal voyages. A ship

which extends its voyage beyond what is defined as a near-coastal voyage

by a Party and enters waters not covered by that definition shall fulfil

the requirements of the Convention without relaxation under this

Regulation.

 3. A Party may afford a ship which is entitled to fly its flag the

benefits of the near-coastal voyages provisions of the Convention when it

is regularly engaged off the coast of a non-Party on near-coastal voyages

as defined by the Party.

 4. Nothing in this Regulation shall in any way limit the jurisdiction

of any State, whether or not a Party to the Convention.

 Regulation I/4 Control Procedures

 1. Control exercised by a duly authorized control officer under

Article X shall be limited to the following:

 (a) verification in accordance with Article X (1) that all

seafarers serving on board who are required to be certificated by the

Convention hold a valid certificate or a valid dispensation;

 (b) assessment of the ability of the seafarers of the ship to

maintain watchkeeping standards as required by the Convention if there are

grounds for believing that such standards are not being maintained

because, while in the port of a Party or in the approaches to that Port,

the following have occurred:

 (i) the ship has been involved in a collision, grounding or

stranding, or

 (ii) there has been a discharge of substances from the ship

when underway, at anchor or at berth which is illegal under international

conventions; or

 (iii) the ship has been manoeuvred in an erratic or unsafe

manner or navigational course markers or traffic separation schemes have

not been followed.

 2. The control officer shall provide written information to the master

of the ship and the appropriate representative of the flag State according

to Article X if, as a result of control action taken in accordance with

paragraph 1, any of the following deficiencies are revealed:

 (a) failure of seafarers, required to hold a certificate, to have

an appropriate valid certificate or valid dispensation;

 (b) failure of navigational or engineering watch arrangements to

conform to the requirements specified for the ship by the flag State;

 (c) absence in a watch of a person qualified to operate equipment

essential to safe navigation or the prevention of pollution;

 (d) inability of the master to provide rested persons for the

first watch at the commencement of a voyage and subsequent relieving

watches.

 3. Failures to correct the deficiencies referred to in paragraph 2 (a)

- to the extent that they relate to the certificates of the master, chief

engineer officer and officers in charge of navigational and engineering

watches and, where relevant, the radio officer-and in paragraph 2 (b),

shall be the only grounds under Article X on which a Party may detain a

ship.

 CHAPTER II. MASTER-DECK DEPARTMENT

 Regulation II/1 Basic Principles to be Observed in Keeping a Navi-gational Watch

 1. Parties shall direct the attention of shipowners, ship operators,

masters and watchkeeping personnel to the following principles which shall

be observed to ensure that a safe navigational watch is maintained at all

times.

 2. The master of every ship is bound to ensure that watchkeeping

arrangements are adequate for maintaining a safe navigational watch. Under

the master\'s general direction, the officers of the watch are responsible

for navigating the ship safely during their periods of duty when they will

be particularly concerned with avoiding collision and stranding.

 3. The basic principles, including but not limited to the following,

shall be taken into account on all ships.

 4. Watch arrangements

 (a) The composition of the watch shall at all times be adequate

and appropriate to the prevailing circumstances and conditions and shall

take into account the need for maintaining a proper look-out.

 (b) When deciding the composition of the watch on the bridge which

may include appropriate deck ratings, the following factors, inter alia,

shall be taken into account:

 (i) at no time shall the bridge be left unattended;

 (ii) weather conditions, visibility and whether there is

daylight or darkness;

 (iii) proximity of navigational hazards which may make it

necessary for the officer in charge of the watch to carry out additional

navigational duties;

 (iv) use and operational condition of navigational aids such

as radar or electronic position-indicating devices and any other equipment

affecting the safe navigation of the ship;

 (v) whether the ship is fitted with automatic steering;

 (vi) any unusual demands on the navigational watch that may

arise as a result of special operational circumstances.

 5. Fitness for duty

 The watch system shall be such that the efficiency of watchkeeping

officers and watchkeeping ratings is not impaired by fatigue. Duties shall

be so organized that the first watch at the commencement of a voyage and

the subsequent relieving watches are sufficiently rested and otherwise fit

for duty.

 6. Navigation

 (a) The intended voyage shall be planned in advance taking into

consideration all pertinent information and any course laid down shall be

checked before the voyage commences.

 (b) During the watch the course steered, position and speed shall

be checked at sufficiently frequent intervals, using any available

navigational aids necessary, to ensure that

the ship follows the planned course.

 (c) The officer of the watch shall have full knowledge of the

location and operation of all safety and navigational equipment on board

the ship and shall be aware and take account of the operating limitations

of such equipment.

 (d) The officer in charge of a navigational watch shall not be

assigned or undertake any duties which would interfere with the safe

navigation of the ship.

 7. Navigational equipment

 (a) The officer of the watch shall make the most effective use of

all navigational equipment at his disposal.

 (b) When using radar, the officer of the watch shall bear in mind

the necessity to comply at all times with the provisions on the use of

radar contained in the applicable regulations for preventing collisions at

sea.

 (c) In cases of need the officer of the watch shall not hesitate

to use the helm, engines and sound signalling apparatus.

 8. Navigational duties and responsibilities

 (a) The officer in charge of the watch shall:

 (i) keep his watch on the bridge which he shall in no

circumstances leave until properly relieved;

 (ii) continue to be responsible for the safe navigation of the

ship, despite the presence of the master on the bridge, until the master

informs him specifically that he has assumed that responsibility and this

is mutually understood;

 (iii) notify the master when in any doubt as to what action to

take in the interest of safety;

 (iv) not hand over the watch to the relieving officer if he

has reason to believe that the latter is obviously not capable of carrying

out his duties effectively, in which case he shall notify the master

accordingly.

 (b) On taking over the watch the relieving officer shall satisfy

himself as to the ship\'s estimated or true position and confirm its

intended track, course and speed and shall note any dangers to navigation

expected to be encountered during his watch.

 (c) A proper record shall be kept of the movements and activities

during the watch relating to the navigation of the ship.

 9. Look-out

 In addition to maintaining a proper look-out for the purpose of fully

appraising the situation and the risk of collision, stranding and other

dangers to navigation, the duties of the lookout shall include the

detection of ships or aircraft in distress, shipwrecked persons, wrecks

and debris. In maintaining a look-out the following shall be observed:

 (a) the look-out must be able to give full attention to the

keeping of a proper look-out and no other duties shall be undertaken or

assigned which could interfere with that task;

 (b) the duties of the look-out and helmsman are separate and the

helmsman shall not be considered to be the look-out while steering, except

in small ships where an unobstructed all-round view is provided at the

steering position and there is no impairment of night vision or other

impediment to the keeping of a proper look-out. The officer in charge of

the watch may be the sole look-out in daylight provided that on each such

occasion:

 (i) the situation has been carefully assessed and it has been

established without doubt that it is safe to do so;

 (ii) full account has been taken of all relevant factors

including, but not limited to:

 - state of weather

 - visibility

 - traffic density

 - proximity of danger to navigation

 - the attention necessary when navigating in or near

traffic separation schemes;

 (iii) assistance is immediately available to be summoned to

the bridge when any change in the situation so requires.

 10. Navigation with pilot embarked

 Despite the duties and obligations of a pilot, his presence on board

does not relieve the master or officer in charge of the watch from their

duties and obligations for the safety of the ship. The master and the

pilot shall exchange information regarding navigation procedures, local

conditions and the ship\'s characteristics. The master and officer of the

watch shall co-operate closely with the pilot and maintain an accurate

check of the ship\'s position and movement.

 11. Protection of the marine environment

 The master and officer in charge of the watch shall be aware of the

serious effects of operational or accidental pollution of the marine

environment and shall take all possible precautions to prevent such

pollution, particularly within the framework of relevant international and

port regulations.

 Regulation II/2 Mandatory Minimum Requirements for CertificationofMasters and Chief Mates of Ships of 200 Gross Register Toms or More

 Master and chief mate of ships of 1600 gross register tons or more

 1. Every master and chief mate of a sea-going ship of 1600 gross

register tons or more shall hold an appropriate certificate.

 2. Every candidate for certification shall:

 (a) satisfy the Administration as to medical fitness, particularly

regarding eyesight and hearing;

 (b) meet the requirements for certification as an officer in

charge of a navigational watch on ships of 200 gross register tons or more

and have approved sea-going service in that capacity:

 (i) for certification as chief mate, not less than 18 months;

however, this period may be reduced to not less than 12 months if the

Administration requires special training which it considers to be

equivalent to at least six months\' service as officer in charge of a

navigational watch;

 (ii) for certification as master, not less than 36 months;

however, this period may be reduced to not less than 24 months if not less

than 12 months of such sea-going service has been served as chief mate, or

if the Administration requires special training which it considers to be

equivalent to such service;

 (c) have passed appropriate examination to the satisfaction of the

Administration. Such examination shall include the material set out in the

Appendix to this Regulation, except that the Administration may vary these

examination requirements for masters and chief mates of ships of limited

size engaged on near-coastal voyages, as it considers necessary, bearing

in mind the effect on the safety of all ships which may be operating in

the same waters.

 Master and chief mate of ships between 200 and 1600 gross register

tons

 3. Every master and chief mate of a sea-going ship of between 200 and

1600 gross register tons shall hold an appropriate certificate.

 4. Every candidate for certification shall:

 (a) satisfy the Administration as to medical fitness, particularly

regarding eyesight and hearing;

 (b) (i) for certification as chief mate, meet the requirements of

an officer in charge of a navigational watch on ships of 200 gross

register tons or more;

 (ii) for certification as master, meet the requirements of an

officer in charge of a navigational watch on ships of 200 gross register

tons or more and have approved seagoing service in that capacity of not

less than 36 months; however, this period may be reduced to not less than

24 months if not less than 12 months of such seagoing service has been

served as chief mate, or if the Administration requires special training

which it considers to be equivalent to such service;

 (c) have passed appropriate examination to the satisfaction of the

Administration. Such examination shall include the material set out in the

Appendix, except that the Administration may vary these examination

requirements for masters and chief mates of ships engaged on near-coastal

voyages, as it considers appropriate, to exclude such material as is not

applicable to the waters or ships concerned, bearing in mind the effect on

the safety of all ships which may be operating in the same waters. General

 5. The level of knowledge required under the different headings of the

Appendix may be varied according to whether the certificate is being

issued at master or chief mate level, and according to whether the

certificate or certificates is applicable to ships of 1600 gross register

tons or more, or to ships of between 200 and 1600 gross register tons.

 APPENDIX TO REGULATION II/2 MINIMUM KNOWLEDGE REQUIRED FOR CERTI-FICATION OF MASTERS AND CHIEF MATES OF SHIPS OF 200 GROSS REGISTER TONS ORMORE

 1. The syllabus given below is compiled for examination of candidates

for certification as master or chief mate of ships of 200 gross register

tons or more. It is intended to expand and extend in depth the subjects

contained in Regulation II/4 - "Mandatory Minimum Requirements for

Certification of Officers in Charge of a Navigational Watch on Ships of

200 Gross Register Tons or More". Bearing in mind that a master has

ultimate responsibility for the safety of the ship, its passengers, crew

and cargo, and that a chief mate shall be in a position to assume that

responsibility at any time, examination in these subjects shall be

designed to test their ability to assimilate all available information

that affects the safety of the ship.

 2. Navigation and position determination

 (a) Voyage planning and navigation for all conditions:

 (i) by acceptable methods of plotting ocean tracks;

 (ii) within restricted waters;

 (iii) in ice;

 (iv) in restricted visibility;

 (v) in traffic separation schemes;

 (vi) in areas of extensive tidal effects.

 (b) Position determination:

 (i) by celestial observations, including the use of sun,

stars, moon and planets;

 (ii) by terrestrial observations, including the ability to use

bearings from landmarks and aids to navigation such as lighthouses,

beacons and buoys in conjunction with appropriate charts, notices to

mariners and other publications to assess the accuracy of the resulting

position fix;

 (iii) using all modern ship electronic navigational aids to

the satisfaction of the Administration, with specific knowledge of their

operating principles, limitations, sources of error, detection of

misrepresentation of information and methods of correction to obtain

accurate position fixing.

 3. Watchkeeping

 (a) Demonstrate thorough knowledge of content, application and

intent of the International Regulations for Preventing Collisions at Sea,

including those Annexes concerned with safe navigation.

 (b) Demonstrate knowledge of Regulation II/1 - "Basic Principles

to be Observed in Keeping a Navigational Watch".

 4. Radar equipment

 Demonstrate in conjunction with the use of radar simulator or, when

not available, manoeuvring board, knowledge of the fundamentals of radar

and ability in the operation and use of radar, and in the interpretation

and analysis of information obtained from this equipment, including:

 (a) factors affecting performance and accuracy;

 (b) setting up and maintaining displays;

 (c) detection of misrepresentation of information, false echoes,

sea return, etc.;

 (d) range and bearing;

 (e) identification of critical echoes;

 (f) course and speed of other ships;

 (g) time and distance of closest approach of crossing, meeting or

overtaking ships;

 (h) detecting course and speed changes of other ships;

 (i) effect of changes in own ship\'s course or speed or both;

 (j) application of the International Regulations for Preventing

Collisions at Sea.

 5. Compasses-magnetic and gyro

 Ability to determine and correct the errors of the magnetic and

gyro-compasses and knowledge of the means for correcting such errors.

 6. Meteorology and oceanography

 (a) Demonstrate the ability to understand and interpret a synoptic

chart and to forecast area weather, taking into account local weather

conditions.

 (b) Knowledge of the characteristics of various weather systems,

including tropical revolving storms and avoidance of storm centres and the

dangerous quadrants.

 (c) Knowledge of ocean current systems.

 (d) Ability to use all appropriate navigational publications on

tides and currents, including those in the English language.

 (e) Ability to calculate tidal conditions.

 7. Ship manoeuvring and handling

 Manoeuvring and handling of a ship in all conditions, including the

following:

 (a) manoeuvres when approaching pilot vessels or stations with due

regard to weather, tide, headreach and stopping distances;

 (b) handling a ship in rivers, estuaries, etc., having regard to

the effects of current, wind and restricted water on the response to the

helm;

 (c) manoeuvring in shallow water, including the reduction in keel

clearance due to the effect of squat\*, rolling and pitching;

 [\* Squat: the decrease in clearance beneath a ship which occurs when

the ship moves through the water and is caused both by bodily sinkage and

by change of trim. The effect is accentuated in shallow water and is

reduced with a reduction in ship\'s speed.]

 (d) interaction between passing ships and between own ship and

nearby banks (canal effect);

 (e) berthing and unberthing under various conditions of wind and

tide with and without tugs;

 (f) choice of anchorage, anchoring with one or two anchors in

limited anchorages and factors involved in determining the length of

anchor cable to be used;

 (g) dragging; clearing fouled anchors;

 (h) dry-docking, both with and without damage;

 (i) management and handling of ships in heavy weather, including

assisting a ship or aircraft in distress, towing operations, means of

keeping an unmanageable ship out of a sea trough, lessening drift and use

of oil;

 (j) precautions in manoeuvring for launching boats or liferafts in

bad weather;

 (k) methods of taking on board survivors from lifeboats or

liferafts;

 (l) ability to determine the manoeuvring and engine

characteristics of major types of ships with special reference to stopping

distances and turning circles at various draughts and speeds;

 (m) the importance of navigating at reduced speed to avoid damage

caused by own ship\'s bow or stern wave;

 (n) practical measures to be taken when navigating in ice or

conditions of ice accumulation on board;

 (o) the use of, and manoeuvring in, traffic separation schemes.

 8. Ship stability \*, construction and damage control

 [\* Masters and chief mates serving on small ships shall be fully

acquainted with the basic stability requirements of such ships.]

 (a) Understanding fundamental principles of ship construction and

the theories and factors affecting trim and stability and measures

necessary to preserve safe trim and stability.

 (b) Knowledge of the effect on trim and stability of a ship in the

event of damage to and consequent flooding of a compartment and counter

measures to be taken.

 (c) Demonstrate use of stability, trim and stress tables, diagrams

and stress calculating equipment, including knowledge of loading cargoes

and ballasting in order to keep hull stresses within acceptable limits.

 (d) General knowledge of the principal structural members of a

ship and the proper names of the various parts.

 (e) Knowledge of IMCO recommendations concerning ship stability.

 9. Ship power plants

 (a) Operating principles of marine power plants.

 (b) Ships\' auxiliary machinery.

 (c) General knowledge of marine engineering terms.

 10. Cargo handling and stowage

 (a) The stowage and securing of cargoes on board ships, including

cargo gear.

 (b) Loading and discharging operations, with special regard to

loading and discharging of heavy weights.

 (c) International regulations and recommendations relating to the

carriage of cargoes, in particular the International Maritime Dangerous

Goods Code (IMDG).

 (d) Carriage of dangerous goods; precautions to be taken during

loading and discharging operations and the care of dangerous goods during

a voyage.

 (e) Working knowledge of contents and application of current

relevant tanker safety guides.

 (f) Working knowledge of commonly used cargo piping and pumping

arrangements.

 (g) Terms and definitions used to describe properties of common

oil cargoes, such as crude oil, middle distillates, naphtha.

 (h) Pollution regulations; ballasting, tank cleaning and gas

freeing operations.

 (i) Load-on-top procedures.

 11. Fire prevention and fire-fighting appliances

 (a) Organization of fire drills.

 (b) Classes and chemistry of fire.

 (c) Fire-fighting systems.

 (d) Attendance at an approved fire-fighting course.

 (e) Knowledge of regulations concerning fire-fighting equipment.

 12. Emergency procedures

 (a) Precautions when beaching a ship.

 (b) Action to be taken prior to, and after, grounding.

 (c) Floating a grounded ship, with and without assistance.

 (d) Action to be taken following a collision.

 (e) Temporary plugging of leaks.

 (f) Measures for the protection and safety of passengers and crew

in emergencies.

 (g) Limiting damage and salving the ship following a fire or

explosion.

 (h) Abandoning ship.

 (i) Emergency steering, rigging and use of jury steering and the

means of rigging a jury rudder, where practicable.

 (j) Rescuing persons from a ship in distress or from a wreck.

 (k) Man-overboard procedures.

 13. Medical care

 A thorough knowledge of the use of the contents of the following

publications:

 (a) International Medical Guide for Ships or equivalent national

publications;

 (b) Medical section of the International Code of Signals;

 (c) Medical First Aid Guide For Use in Accidents Involving

Dangerous Goods.

 14. Maritime law

 (a) A knowledge of international maritime law as embodied in

international agreements and conventions as they affect the specific

obligations and responsibilities of the master, particularly those

concerning safety and the protection of the marine environment. Regard

shall be paid especially to the following subjects:

 (i) certificates and other documents required to be carried on

board ships by international conventions, how they may be obtained and the

period of their legal validity;

 (ii) responsibilities under the relevant requirements of the

International Convention on Load Lines;

 (iii) responsibilities under the relevant requirements of the

International Convention for the Safety of Life at Sea;

 (iv) responsibilities under international conventions for the

prevention of pollution from ships;

 (v) maritime declarations of health, the requirements of the

International Health Regulations;

 (vi) responsibilities under the Convention on the

International Regulations for Preventing Collisions at Sea;

 (vii) responsibilities under other international instruments

affecting the safety of the ship, passengers, crew and cargo.

 (b) The extent of knowledge of national maritime legislation is

left to the discretion of the Administration but shall include national

arrangements for implementing international agreements and conventions.

 15. Personnel management and training responsibilities

 A knowledge of personnel management, organization and training aboard

ships.

 16. Communications

 (a) Ability to transmit and receive messages by Morse light and to

use the International Code of Signals; where the Administration has

examined candidates in these subjects at the lower levels of

certification, they may have the option of not re-examining in these

subjects for certification as master.

 (b) Knowledge of procedures used in radiotelephone communications

and ability to use radiotelephones, in particular with respect to

distress, urgency, safety and navigational messages.

 (c) A knowledge of the procedures for emergency distress signals

by radiotelegraphy as prescribed in the Radio Regulations.

 17. Life-saving

 A thorough knowledge of life-saving appliance regulations

(International Convention for the Safety of Life at Sea), organisation of

abandon ship drills, lifeboats, liferafts and other life-saving equipment.

 18. Search and rescue

 A thorough knowledge of the IMCO Merchant Ship Search and Rescue

Manual (MERSAR).

 19. Methods for demonstration of proficiency

 (a) Navigation

 Demonstrate the use of sextant, pelorus, azimuth mirror and ability to

plot position, course, bearings.

 (b) International Regulations for Preventing Collisions at Sea

 (i) use of small models displaying proper signals or lights, or

navigation light simulator;

 (ii) manoeuvring board or radar simulator

 (c) Radar

 (i) radar simulator; or

 (ii) manoeuvring boards.

 (d) Fire-fighting

 Attendance at an approved fire-fighting course.

 (e) Communications

 Visual and vocal practical test.

 (f) Life-saving

 Launching and handling of lifeboats and other life-saving appliances,

including the donning of life-jackets.

 Regulation II/3 Mandatory Minimum Requirements for CertificationofOfficers in Charge of a Navigational Watch and of Masters of Ships ofLess than 200 Gross Register Tons

 1. Ships not engaged on near-coastal voyages

 (a) Every master serving on a sea-going ship of less than 200

gross register tons not engaged on near-coastal voyages shall hold a

certificate recognized by the Administration for service as master of

ships of between 200 and 1600 gross register tons.

 (b) Every officer in charge of a navigational watch serving on a

sea-going ship of less than 200 gross register tons not engaged on

near-coastal voyages shall hold an appropriate certificate for ships of

200 gross register tons or more.

 2. Ships engaged on near-coastal voyages

 (a) Master

 (i) Every master serving in a sea-going ship of less than 200

gross register tons engaged on near-coastal voyages shall hold an

appropriate certificate.

 (ii) Every candidate for certification shall:

 (1) be not less than 20 years of age;

 (2) have approved sea-going service of not less than 12

months as officer in charge of a navigational watch;

 (3) satisfy the Administration that he possesses adequate

knowledge appropriate to his duties on the ships concerned which shall

include the subjects contained in the Appendix to this Regulation.

 (b) Officer in charge of a navigational watch

 (i) Every officer in charge of a navigational watch on a

sea-going ship of less than 200 gross register tons engaged on

near-coastal voyages shall hold an appropriate certificate.

 (ii) Every candidate for certification shall:

 (1) be not less than 18 years of age;

 (2) satisfy the Administration as to medical fitness,

particularly regarding eyesight and hearing;

 (3) satisfy the Administration that he has:

 - successfully undergone special training, including

an adequate period of appropriate sea-going service as required by the

Administration; or

 - completed approved sea-going service in the deck

department of not less than three years;

 (4) satisfy the Administration that he possesses adequate

knowledge appropriate to his duties on the ships concerned, which shall

include the subjects contained in the Appendix.

 3. Training

 Training to achieve the necessary knowledge and practical experience

shall be based on Regulation II/1 - "Basic Principles to be Observed in

Keeping a Navigational Watch" and relevant international regulations and

recommendations.

 4. Exemptions

 The Administration, if it considers that a ship\'s size and the

conditions of its voyage are such as to render the application of the full

requirements of this Regulation and its Appendix unreadable or

impracticable, may to that extent exempt the master and the officer in

charge of a navigational watch on such a ship or class of ships from some

of the requirements, bearing in mind the safety of all ships which may be

operating in the same waters.

 APPENDIX TO REGULATION II/3 MINIMUM KNOWLEDGE REQUIRED FOR CERTI-FICATION OF OFFICERS IN CHARGE OF A NAVIGATIONAL WATCH AND OF MASTERS OFSHIPS OF LESS THAN 200 GROSS REGISTER TONS

 1. (a) Knowledge of the following:

 (i) coastal navigation and, to the extent required, celestial

navigation;

 (ii) International Regulations for Preventing Collisions at

Sea;

 (iii) International Maritime Dangerous Goods Code (IMDG);

 (iv) magnetic compass;

 (v) radiotelephony and visual signalling;

 (vi) fire prevention and fire-fighting appliances;

 (vii) life-saving;

 (viii) emergency procedures;

 (ix) ship manoeuvring;

 (x) ship stability;

 (xi) meteorology;

 (xii) small ship power plants;

 (xiii) first aid;

 (xiv) search and rescue;

 (xv) prevention of pollution of the marine environment.

 (b) In addition to the requirements of sub-paragraph (a),

sufficient knowledge to operate safely all navigational aids and equipment

fitted aboard the ships concerned.

 (c) The level of knowledge to be required in the subjects

specified in sub-paragraphs (a) and (b) shall be sufficient for the

officer of the watch to carry out his duties safely.

 2. Every master serving on a sea-going ship of less than 200 gross

register tons shall, in addition to the requirements of paragraph 1 above,

satisfy the Administration that he possesses the knowledge to carry out

all the duties of such a master safely.

 Regulation II/4 Mandatory Minimum Requirements for CertificationofOfficers in Charge of a Navigational Watch on Ships of 200 Gross Regis-ter Tons or More

 1. Every officer in charge of a navigational watch serving on a

sea-going ship of 200 gross register tons or more shall hold an

appropriate certificate.

 2. Every candidate for certification shall:

 (a) be not less than 18 years of age;

 (b) satisfy the Administration as to medical fitness, particularly

regarding eyesight and hearing;

 (c) have approved sea-going service in the deck department of not

less than three years which shall include at least six months of bridge

watchkeeping duties under the supervision of a qualified officer; however,

an Administration may allow the substitution of a period of special

training for not more than two years of this approved sea-going service,

provided the Administration is satisfied that such training is at least

equivalent in value to the period of sea-going service it replaces;

 (d) satisfy the Administration by passing an appropriate

examination that he possesses adequate theoretical and practical knowledge

appropriate to his duties.

 3. Certificates for service without restriction

 For issue of certificates for services without restriction as to area

of operation, the examination shall test the adequacy of the candidate\'s

theoretical and practical knowledge in the subjects shown in the Appendix

to this Regulation.

 4. Restricted certificates

 For issue of restricted certificates for service on near-coastal

voyages, the Administration may omit the following subjects from those

shown in the Appendix, bearing in mind the effect on the safety of all

ships which may be operating in the same waters:

 (a) celestial navigation;

 (b) electronic systems of position fixing and navigation for

waters not covered by such systems.

 5. Level of knowledge

 (a) The level of knowledge to be required in the subjects shown in

the Appendix shall be sufficient for the officer of the watch to carry out

his watchkeeping duties safely. In determining the appropriate level of

knowledge the Administration shall take into account the remarks under

each subject in the Appendix.

 (b) Training to achieve the necessary theoretical knowledge and

practical experience shall be based on Regulation II/1- "Basic Principles

to be Observed in Keeping a Navigational Watch" and relevant international

regulations and recommendations.

 APPENDIX TO REGULATION II/4 MINIMUM KNOWLEDGE REQUIRED FOR CERTI-FICATION OF OFFICERS IN CHARGE OF A NAVIGATIONAL WATCH ON SHIPS OF 200GROSS REGISTER TONS OR MORE

 1. Celestial navigation

 Ability to use celestial bodies to determine the ship\'s position and

compass errors.

 2. Terrestrial and coastal navigation

 (a) Ability to determine the ship\'s position by the use of:

 (i) landmarks;

 (ii) aids to navigation, including lighthouses, beacons and

buoys;

 (iii) dead reckoning, taking into account winds, tides,

currents and speed by propeller revolutions per minute and by log.

 (b) Thorough knowledge of and ability to use navigational charts

and publications, such as sailing directions, tide tables, notices to

mariners, radio navigational warnings and ships\' routeing information.

 3. Radar navigation

 Knowledge of the fundamentals of radar and ability in the operation

and use of radar and ability to interpret and analyse information obtained

by use of radar including the following:

 (a) factors affecting performance and accuracy;

 (b) setting up and maintaining displays;

 (c) detection of misrepresentation of information, false echoes, sea

return, etc.;

 (d) range and bearing;

 (e) identification of critical echoes;

 (f) course and speed of other ships;

 (g) time and distance of closest approach of crossing, meeting or

overtaking ships;

 (h) detecting course and speed changes of other ships;

 (i) effect of changes in own ship\'s course or speed or both;

 (j) application of the International Regulations for Preventing

Collisions at Sea.

 4. Watchkeeping

 (a) Demonstrate thorough knowledge of content, application and

intent of the International Regulations for Preventing Collisions at Sea,

including those Annexes concerned with safe navigation.

 (b) Demonstrate knowledge of content of Regulation II/1-"Basic

Principles to be Observed in Keeping a Navigational Watch".

 5. Electronic systems of position fixing and navigation

 Ability to determine the ship\'s position by the use of electronic

navigational aids to the satisfaction of the Administration.

 6. Radio direction-finders and echo-sounders

 Ability to operate the equipment and apply the information correctly.

 7. Meteorology

 Knowledge of shipborne meteorological instruments and their

application. Knowledge of the characteristics of various weather systems,

reporting procedures and recording systems and the ability to apply the

meteorological information available.

 8. Compasses-magnetic and gyro

 Knowledge of the principles of magnetic and gyro-compasses including

errors and corrections. With regard to gyro-compasses, an understanding of

the systems under the control of the master gyro and a knowledge of the

operation and care of the main types of gyro-compasses.

 9. Automatic pilot

 Knowledge of automatic pilot systems and procedures.

 10. Radiotelephony and visual signalling

 (a) Ability to transmit and receive messages by Morse light.

 (b) Ability to use the International Code of Signals.

 (c) Knowledge of procedures used in radiotelephone communications

and ability to use radiotelephones, in particular wit respect to

distress, urgency, safety and navigational messages.

 11. Fire prevention and fire-fighting appliances

 (a) Ability to organize fire drills.

 (b) Knowledge of classes and chemistry of fire.

 (c) Knowledge of fire-fighting systems.

 (d) Attendance at an approved fire-fighting course.

 12. Life-saving

 Ability to organize abandon ship drills and knowledge of the operation

of lifeboats, liferafts, buoyant apparatus and similar life-saving

appliances along with their equipment, including portable radio apparatus

and emergency position-indicating radio beacons (EPIRBs). Knowledge of

survival at sea techniques.

 13. Emergency procedures

 Knowledge of the items listed in the appropriate Appendix of the

current edition of the ILO/IMCO "Document for Guidance".

 14. Ship manoeuvring and handling

 Knowledge of:

 (a) the effects of various deadweights, draughts, trim, speed and

under keel clearance on turning circles and stopping distances;

 (b) effects of wind and current on ship handling;

 (c) manoeuvres for the rescue of man-overboard;

 (d) squat, shallow water and similar effects;

 (e) proper procedures for anchoring and mooring.

 15. Ship stability

 (a) Working knowledge and application of stability, trim and

stress tables, diagrams and stress calculating equipment.

 (b) Understanding of fundamental actions to be taken in the event

of partial loss of intact buoyancy.

 16. English language

 Adequate knowledge of the English language enabling the officer to use

charts and other nautical publications, to understand meteorological

information and messages concerning ship\'s safety and operation and to

express himself clearly in his communications with other ships or coast

stations. Ability to understand and use the IMCO Standard Marine

Navigational Vocabulary.

 17. Ship construction

 General knowledge of the principal structural members of a ship and

the proper names of the various parts.

 18. Cargo handling and stowage

 Knowledge of safe handling and stowage of cargoes and the effect of

these factors on the safety of the ship.

 19. Medical aid

 Practical application of medical guides and advice by radio, including

the ability to take effective action based on such knowledge in the case

of accidents or illnesses that are likely to occur on board ship.

 20. Search and rescue

 Knowledge of the IMCO Merchant Ship Search and Rescue Manual (MERSAR).

 21. Prevention of pollution of the marine environment

 Knowledge of the precautions to be observed to prevent pollution of

the marine environment.

 Regulation II/5 Mandatory Minimum Requirements to Ensure the Con-tinued Proficiency and Updating of Knowledge for Masters and Deck Officers

 1. Every master and every deck officer holding a certificate who is

serving at sea or intends to return to sea after a period ashore shall, in

order to continue to qualify for sea-going service, be required at regular

intervals not exceeding five years to satisfy the Administration as to:

 (a) medical fitness, particularly regarding eyesight and hearing; and

 (b) professional competence:

 (i) by approved sea-going service as master or deck officer of at

least one year during the preceding five years; or

 (ii) by virtue of having performed functions relating to the

duties appropriate to the grade of certificate held which are considered

to be at least equivalent to the seagoing service required in paragraph

1(b) (i); or

 (iii) by one of the following:

 -passing an approved test; or

 -successfully completing an approved course or courses; or

 -having completed approved sea-going service as a deck

officer for a period of not less than three months in a supernumerary

capacity immediately prior to taking up the rank to which he is entitled

by virtue of his certificate.

 2. The Administration shall, in consultation with those concerned,

formulate or promote the formulation of a structure of refresher and

updating courses, either voluntary or mandatory, as appropriated, for

masters and deck officers who are serving at sea, especially for

re-entrants to sea-going service. The Administration shall ensure that

arrangements are made to enable all persons concerned to attend such

courses as appropriate to their experience and duties. Such courses shall

be approved by the Administration and include changes in marine technology

and relevant international regulations and recommendations concerning the

safety of life at sea and the protection of the marine environment.

 3. Every master and deck officer shall, for continuing sea-going

service on board ships for which special training requirements have been

internationally agreed upon, successfully complete an approved relevant

training.

 4. The Administration shall ensure that the texts of recent changes in

international regulations concerning the safety of life at sea and the

protection of the marine environment are made available to ships under its

jurisdiction.

 Regulation II/6 Mandatory Minimum Requirements for Ratings FormingPart of a Navigational Watch

 1. The minimum requirements for a rating forming part of a

navigational watch on a seagoing ship of 200 gross register tons or more

are set out in paragraph 2. These requirements are not those for

certification of able seamen, nor, except for ships of limited size, are

they minimum requirements for a rating who is to be the sole rating of a

navigational watch. Administrations may require additional training and

qualifications for a rating who is to be the sole rating of a navigational

watch.

 2. Every rating forming part of a navigational watch on a sea-going

ship of 200 gross register tons or more shall:

 (a) be not less than 16 years of age;

 (b) satisfy the Administration as to medical fitness, particularly

regarding eyesight and hearing;

 (c) satisfy the Administration that he has:

 (i) completed approved sea-going service, including not less

than six months\' sea experience associated, in particular, with

navigational watchkeeping duties; or

 (ii) successfully undergone special training, either pre-sea

or aboard ship, including an adequate period of sea-going service as

required by the Administration which shall be not less than two months;

 (d) have experience or training which includes:

 (i) basic principles of fire-fighting, first aid, personal

survival techniques, health hazards and personal safety;

 (ii) ability to understand orders and make himself understood

by the officer of the watch in matters relevant to his duties;

 (iii) ability to steer and comply with helm orders, together

with sufficient knowledge of magnetic and gyro compasses for performance

of these duties;

 (iv) ability to keep a proper look-out by sight and hearing

and report the approximate bearing of a sound signal, light or other

object in degrees or points;

 (v) familiarity with the change-over from automatic pilot to

hand steering and vice versa;

 (vi) knowledge of the use of appropriate internal

communication and alarm systems;

 (vii) knowledge of pyrotechnic distress signals;

 (viii) knowledge of his emergency duties;

 (ix) knowledge of shipboard terms and definitions appropriate

to his duties.

 3. The experience, service or training required by paragraphs 2 (c)

and (d) may be acquired through performance of duties associated with

navigational watchkeeping, but only if such duties are carried out under

the direct supervision of the master, officer in charge of the

navigational watch or a qualified rating.

 4. Administrations shall ensure that an authorized document is issued

to every seafarer who by experience or training is qualified in accordance

with this Regulation to serve as a rating forming part of a navigational

watch, or that his existing document is duly endorsed.

 5. A seafarer may be considered by the Administration to have met the

requirements of this Regulation if he has served in a relevant capacity in

the deck department for a period of not less than one year within the last

five years preceding the entry into force of the Convention for that

Administration.

 Regulation II/7 Basic Principles to be Observed in Keeping a WatchinPort

 1. On any ship safely moored or safely at anchor under normal

circumstances in port, the master shall arrange for an appropriate and

effective watch to be maintained for the purpose of safety.

 2. In organizing the watches note shall be taken of the provisions of

the "Recommendation on Principles and Operational Guidance for Deck

Officers in Charge of a Watch in Port" and the "Recommendation on

Principles and Operational Guidance for Engineer Officers in Charge of an

Engineering Watch in Port" adopted by the International Conference on

Training and Certification of Seafarers, 1978.

 Regulation II/8 Mandatory Minimum Requirements for a Watch in PortonShips Carrying Hazardous Cargo

 1. The master of every ship carrying cargo in bulk that is

hazardous-whether it is, or may be, explosive, flammable, toxic,

health-threatening or environment polluting-shall ensure that a safe deck

watch and a safe engineering watch are maintained by the ready

availability on board of a duly qualified officer or officers, and ratings

where appropriate, even when the ship is safely moored or safely at anchor

in port.

 2. The master of every ship carrying hazardous cargo other than in

bulk-whether it is, or may be, explosive, flammable, toxic,

health-threatening or environment polluting-shall in organizing safe

watchkeeping arrangements take full account of the nature, quantity,

packing and stowage of the hazardous cargo and of any special conditions

on board, afloat and ashore.

 3. In organizing the watches full account shall be taken of the

"Recommendation on Principles and Operational Guidance for Deck Officers

in Charge of a Watch in Port" and the "Recommendation on Principles and

Operational Guidance for Engineer Officers in Charge of an Engineering

Watch in Port" adopted by the International Conference on Training and

Certification of Seafarers, 1978.

CHARTER III. ENGINE DEPARTMENT

 Regulation III/1 Basic Principles to be Observed in Keeping an En-gineering Watch

 1. Parties shall direct the attention of shipowners, ship operators,

masters, chief engineer officers and watchkeeping personnel to the

following principles which shall be observed to ensure that a safe

engineering watch is maintained at all times.

 2. The term "watch" is used in this Regulation to mean either a group

of personnel composing the watch or a period of responsibility for an

engineer officer during which his physical presence in the machinery space

may or may not be required.

 3. The basic principles, including but not limited to the following,

shall be taken into account on all ships.

 4. General

 (a) The chief engineer officer of every ship is bound, in

consultation with the master, to ensure that watchkeeping arrangements are

adequate to maintain a safe watch. When deciding the composition of the

watch, which may include appropriate engine room ratings, the following

criteria, inter alia, shall be taken into account:

 (i) type of ship;

 (ii) type and condition of the machinery;

 (iii) special modes of operation dictated by conditions such

as weather, ice, contaminated water, shallow water, emergency conditions,

damage containment or pollution abatement;

 (iv) qualifications and experience of the watch;

 (v) safety of life, ship, cargo and port, and protection of

the environment;

 (vi) observance of international, national and local

regulations;

 (vii) maintaining the normal operations of the ship.

 (b) Under the direction of the chief engineer officer, the

engineer officer in charge of the watch shall be responsible for the

inspection, operation and testing, as required, of all machinery and

equipment under his responsibility. The engineer officer in charge of a

watch is the chief engineer officer\'s representative and his primary

responsibility, at all times, shall be the safe and efficient operation

and up-keep of machinery affecting the safety of the ship.

 (c) The chief engineer officer shall, in consultation with the

master, determine in advance the needs of the intended voyage, taking into

consideration the requirements for fuel, water, lubricants, chemicals,

expendable and other spare parts, tools, supplies and any other

requirements.

 5. Operation

 (a) The engineer officer in charge of the watch shall ensure that

the established watchkeeping arrangements are maintained. Under his

general direction engine room ratings, if forming part of the watch,

shall be required to assist in the safe and efficient operation of the

propulsion machinery and the auxiliary equipment.

 (b) At the commencement of the engineering watch, the current

operational parameters and condition of all machinery shall be verified.

Any machinery not functioning properly, expected to malfunction or

requiring special service, shall be noted along with any action already

taken. Plans shall be made for any further action if required.

 (c) The engineer officer in charge of the watch shall ensure that

the main propulsion plant and auxiliary systems are kept under constant

surveillance, inspections are made of the machinery and steering gear

spaces at suitable intervals and appropriate action is taken to remedy any

malfunction discovered.

 (d) When the machinery spaces are in the manned condition, the

engineer officer in charge of the watch shall at all times be readily

capable of operating the propulsion equipment in response to needs for

changes in direction or speed. When the machinery spaces are in the

periodic unmanned condition, the designated duty engineer officer in

charge of the watch shall be immediately available and on call to attend

the machinery spaces.

 (e) All bridge orders shall be promptly executed. Changes in

direction or speed of the main propulsion unit shall be recorded, except

where an Administration determines that the size or characteristics of a

particular ship make such recording impracticable. The engineer officer in

charge of the watch shall ensure that the main propulsion unit controls,

when in the manual mode of operation, are continuously attended under

standby or manoeuvring conditions.

 (f) The engineer officer in charge of the watch shall not be

assigned or undertake any duties which would interfere with his

supervisory duty in respect of the main propulsion system and its

ancillary equipment and he shall ensure that the main propulsion system

and auxiliary equipment are kept under constant surveillance until he is

properly relieved.

 (g) Due attention shall be paid to the maintenance and support of

all machinery, including mechanical, electrical, hydraulic and pneumatic

systems, their control apparatus and associated safety equipment, all

accommodation service systems equipment and the recording of stores and

spare gear usage.

 (h) The chief engineer officer shall ensure that the engineer

officer in charge of the watch is informed of all preventive maintenance,

damage control, or repair operations to be performed during the watch.

The engineer officer in charge of the watch shall be responsible for the

isolation, by-passing and adjustment of all machinery under his

responsibility that is to be worked on, and shall record all work carried

out.

 (i) Before going off duty, the engineer officer in charge of the

watch shall ensure that all events related to the main and auxiliary

machinery are suitably recorded.

 (j) To avoid any danger to the safety of the ship and its crew,

the engineer officer in charge of the watch shall notify the bridge

immediately in the event of fire, impending actions in machinery spaces

that may cause reduction in ship\'s speed, imminent steering failure,

stoppage of the ship\'s propulsion system or any alteration in the

generation of electric power, or similar threat to safety. This

notification, where possible, shall be accomplished before changes are

made in order to afford the bridge the maximum available time to take

whatever actions are possible to avoid a potential marine casualty.

 (k) When the engine room is put in a standby condition, the

engineer officer in charge of the watch shall ensure that all machinery

and equipment which may be used during manoeuvring is in a state of

immediate readiness and that an adequate reserve of power is available for

steering gear and other requirements.

 6. Watch requirements

 (a) Every member of the watch shall be familiar with his assigned

watchkeeping duties.

 In addition, every member shall have with respect to that ship:

 (i) knowledge of the use of appropriate internal communication

systems;

 (ii) knowledge of escape routes from machinery spaces;

 (iii) knowledge of engine room alarm systems and the ability

to distinguish between

 |----|

the various alarms with special reference to the | CO | alarm;

 | 2|

 |----|

 (iv) knowledge of the positions and use of the fire-fighting

equipment in the machinery spaces.

 (b) The composition of an underway watch shall, at all times, be

adequate to ensure the safe operation of all machinery affecting the

operation of the ship, in either automated or manual mode and be

appropriate to the prevailing circumstances and conditions. To achieve

this, the following, inter alia, shall be taken into account:

 (i) adequate supervision, at all times, of machinery affecting

the safe operation of the ship;

 (ii) condition and reliability of any remotely operated

propulsion and steering equipment and their controls, control location and

the procedures involved in placing them in a manual mode of operation in

the event of bread-down or emergency;

 (iii) location and operation of fixed fire detection, fire

extinction or fire containment devices and apparatus;

 (iv) use and operational condition of auxiliary, standby and

emergency equipment affecting the safe navigation, mooring or docking

operations of the ship;

 (v) steps and procedures necessary to maintain the condition

of machinery installations in order to ensure their efficient operation

during all modes of ship operation;

 (vi) any other demands on the watch which may arise as a

result of special operating circumstances.

 (c) At an unsheltered anchorage the chief engineer officer shall

consult with the master whether or not to maintain an underway watch.

 7. Fitness for duty

 The watch system shall be such that the efficiency of the watch is not

impaired by fatigue. Duties shall be so organized by the chief engineer

officer that the first watch at the commencement of a voyage and the

subsequent relieving watches are sufficiently rested and otherwise fit for

duty.

 8. Protection of the marine environment

 All engineer officers and engine room ratings shall be aware of the

serious effects of operational or accidental pollution of the marine

environment and shall take all possible precautions to prevent such

pollution, particularly within the framework of relevant international and

port regulations.

 Regulation III/2 Mandatory Minimum Requirements for CertificationofChief Engineer Officers and Second Engineer Officers of Ships PoweredbyMain Propulsion Machinery of 3000 kW Propulsion Power or More

 1. Every chief engineer officer and second engineer officer of a

sea-going ship powered by main propulsion machinery of 3000 kW propulsion

power or more shall hold an appropriate certificate.

 2. Every candidate for certification shall:

 (a) satisfy the Administration as to medical fitness, including

eyesight and hearing.

 (b) meet the requirements for certification as an engineer officer

in charge of a watch; and

 (i) for certification as second engineer officer, have not

less than 12 months\' approved sea-going service as assistant engineer

officer or engineer officer;

 (ii) for certification as chief engineer officer, have not

less than 36 months\' approved sea-going service of which not less than 12

months shall be served as an engineer officer in a position of

responsibility while qualified to serve as second engineer officer;

 (c) have attended an approved practical fire-fighting course;

 (d) have passed appropriate examination to the satisfaction of the

Administration. Such examination shall include the material set out in the

Appendix to this Regulation, except that the Administration may vary these

examination requirements for officers of ships with limited propulsion

power that are engaged on near-coastal voyages, as it considers necessary,

bearing in mind the effect on the safety of all ships which may be

operating in the same waters.

 3. Training to achieve the necessary theoretical knowledge and

practical experience shall take into account relevant international

regulations and recommendations.

 4. The level of knowledge required under the different paragraphs of

the Appendix may be varied according to whether the certificate is being

issued at chief engineer officer and second engineer officer level.

 APPENDIX TO REGULATION III/2 MINIMUM KNOWLEDGE REQUIRED FOR CERTI-FICATION OF CHIEF ENGINEER OFFICERS AND SECOND ENGINEER OFFICERS OF SHIPSPOWERED BY MAIN PROPULSION MACHINERY OF 3000 kW PROPULSION POWER OR MORE

 1. The syllabus given below is compiled for examination of candidates

for certification as chief engineer officer or second engineer officer of

ships powered by main propulsion machinery of 3000 kW propulsion power or

more. Bearing in mind that a second engineer officer shall be in a

position to assume the responsibilities of a chief engineer officer at any

time, examination in these subjects shall be designed to test the

candidate\'s ability to assimilate all available information that affects

the safe operation of the ship\'s machinery.

 2. With respect to paragraph 4(a) below, the Administration may omit

knowledge requirements for types of propulsion machinery other than those

machinery installations for which the certificate to be awarded shall be

valid. A certificate awarded on such a basis shall not be valid for any

category of machinery installation which has been omitted until the

engineer officer proves to be competent in these items to the satisfaction

of the Administration. Any such limitation shall be stated in the

certificate.

 3. Every candidate shall possess theoretical knowledge in the

following subjects:

 (a) thermodynamics and heat transmission;

 (b) mechanics and hydromechanics;

 (c) operational principles of ships\' power installations (diesel,

steam and gas turbine) and refrigeration;

 (d) physical and chemical properties of fuels and lubricants;

 (e) technology of materials;

 (f) chemistry and physics of fire and extinguishing agents;

 (g) marine electrotechnology, electronics and electrical

equipment;

 (h) fundamentals of automation, instrumentation and control

systems;

 (i) naval architecture and ship construction, including damage

control.

 4. Every candidate shall possess adequate practical knowledge in at

least the following subjects:

 (a) operation and maintenance of:

 (i) marine diesel engines;

 (ii) marine steam propulsion plant;

 (iii) marine gas turbines;

 (b) operation and maintenance of auxiliary machinery, including

pumping and piping systems, auxiliary boiler plant and steering gear

systems;

 (c) operation, testing and maintenance of electrical and control

equipment;

 (d) operation and maintenance of cargo handling equipment and deck

machinery;

 (e) detection of machinery malfunction, location of faults and

action to prevent damage;

 (f) organization of safe maintenance and repair procedures;

 (g) methods of, and aids for, fire prevention, detection and

extinction;

 (h) methods and aids to prevent pollution of the environment by

ships;

 (i) regulations to be observed to prevent pollution of the marine

environment;

 (j) effects of marine pollution on the environment;

 (k) first aid related to injuries which might be expected in

machinery spaces and use of first aid equipment;

 (l) functions and use of life-saving appliances;

 (m) methods of damage control;

 (n) safe working practices.

 5. Every candidate shall possess a knowledge of international maritime

law embodied in international agreements and conventions as they affect

the specific obligations and responsibilities of the engine department,

particularly those concerning safety and the protection of the marine

environment. The extent of knowledge of national maritime legislation is

left to the discretion of the Administration but shall include national

arrangements for implementing international agreements and conventions.

 6. Every candidate shall possess a knowledge of personnel management,

organization and training aboard ships.

 Regulation III/3 Mandatory Minimum Requirements for CertificationofChief Engineer Officers and Second Engineer Officers of Ships PoweredbyMain Propulsion Machinery between 750 kW and 3000 kW Propulsion Power

 1. Every chief engineer officer and second engineer officer of a

sea-going ship powered by main propulsion machinery of between 750 and

3000 kW propulsion power shall hold an appropriate certificate.

 2. Every candidate for certification shall:

 (a) satisfy the Administration as to medical fitness, including

eyesight and hearing;

 (b) meet the requirements for certification as an engineer officer

in charge of a watch; and

 (i) for certification as second engineer officer, have not

less than 12 months\' approved sea-going service as assistant engineer

officer or engineer officer;

 (ii) for certification as chief engineer officer, have not

less than 24 months\' approved sea-going service of which not less than 12

months shall be served while qualified to serve as second engineer

officer;

 (c) have attended an approved practical fire-fighting course;

 (d) have passed appropriate examination to the satisfaction of the

Administration. Such examination shall include the material set out in the

Appendix to this Regulation, except that the Administration may vary the

requirements for examination and sea-going service for officers of ships

engaged on near-coastal voyages, bearing in mind the types of automatic

and remotely operated controls with which such ships are fitted and the

effect on the safety of all ships which may be operating in the same

waters.

 3. Training to achieve the necessary theoretical knowledge and

practical experience shall take into account relevant international

regulations and recommendations.

 4. The level of knowledge required under the different paragraphs of

the Appendix may be varied according to whether the certificate is being

issued at chief engineer officer or second engineer officer level.

 5. Every engineer officer who is qualified to serve as second engineer

officer of ships powered by main propulsion machinery of 3000 kW

propulsion power or more, may serve as chief engineer officer of ships

powered by main propulsion machinery of less than 3000 kW propulsion power

provided that not less than 12 months\' approved sea-going service shall

have been served as an engineer officer in a position of responsibility.

 APPENDIX TO REGULATION III/3 MINIMUM KNOWLEDGE REQUIRED FOR CERTI-FICATION OF CHIEF ENGINEER OFFICERS AND SECOND ENGINEER OFFICERS OF SHIPSPOWERED BY MAIN PROPULSION MACHINERY OF BETWEEN 750 kW AND 3000 kW PROPUL-SION POWER

 1. The syllabus given below is compiled for examination of candidates

for certification as chief engineer officer or second engineer officer of

ships powered by main propulsion machinery of between 750 kW and 3000 kW

propulsion power. Bearing in mind that a second engineer officer shall be

in a position to assume the responsibilities of the chief engineer officer

at any time, examination in these subjects shall be designed to test the

candidate\'s ability to assimilate all available information that affects

the safe operation of the ship\'s machinery.

 2. With respect to paragraphs 3(d) and 4(a) below, the Administration

may omit knowledge requirements for types of propulsion machinery other

than those machinery installations for which the certificate to be awarded

shall be valid. A certificate awarded on such a basis shall not be valid

for any category of machinery installation which has been omitted until

the engineer officer proves to be competent in these items to the

satisfaction of the Administration. Any such limitation shall be stated in

the certificate.

 3. Every candidate shall possess sufficient elementary theoretical

knowledge to understand the basic principles involved in the following

subjects:

 (a) combustion processes;

 (b) heat transmission;

 (c) mechanics and hydromechanics;

 (d) (i) marine diesel engines;

 (ii) marine steam propulsion plant;

 (iii) marine gas turbines;

 (e) steering gear systems;

 (f) properties of fuels and lubricants;

 (g) properties of materials;

 (h) fire-extinguishing agents;

 (i) marine electrical equipment;

 (j) automation, instrumentation and control systems;

 (k) ship construction, including damage control;

 (l) auxiliary systems.

 4. Every candidate shall possess adequate practical knowledge, in at

least the following subjects:

 (a) operation and maintenance of:

 (i) marine diesel engines;

 (ii) marine steam propulsion plant;

 (iii) marine gas turbines;

 (b) operation and maintenance of auxiliary machinery systems,

including steering gear systems;

 (c) operation, testing and maintenance of electrical and control

equipment;

 (d) operation and maintenance of cargo handling equipment and deck

machinery;

 (e) detection of machinery malfunction, location of faults and

action to prevent damage;

 (f) organization of safe maintenance and repair procedures;

 (g) methods of, and aids for, fire prevention, detection and

extinction;

 (h) regulations to be observed regarding pollution of the marine

environment and methods and aids to prevent such pollution;

 (i) first aid related to injuries which might be expected in

machinery spaces and use of first aid equipment;

 (j) functions and use of life-saving appliances;

 (k) methods of damage control with specific reference to action to

be taken in the event of flooding of sea water into the engine room;

 (l) safe working practices.

 5. Every candidate shall possess a knowledge of international maritime

law as embodied in international agreements and conventions as they affect

the specific obligations and responsibilities of the engine department,

particularly those concerning safety and the protection of the marine

environment. The extent of knowledge of national maritime legislation is

left to the discretion of the Administration but shall include national

arrangements for implementing international agreements and conventions.

 6. Every candidate shall possess a knowledge of personnel management,

organization and training aboard ships.

 Regulation III/4 Mandatory Minimum Requirements for CertificationofEngineer Officers in Charge of a Watch in a Traditionally Manned EngineRoom or Designated Duty Engineer Officers in a Periodically Unmanned En-gine Room

 1. Every engineer officer in charge of a watch in a traditionally

manned engine room or the designated duty engineer officer in a

periodically unmanned engine room on a sea-going ship powered by main

propulsion machinery of 750 kW propulsion power or more shall hold an

appropriate certificate.

 2. Every candidate for certification shall:

 (a) be not less than 18 years of age;

 (b) satisfy the Administration as to medical fitness, including

eyesight and hearing;

 (c) have not less than a total of three years approved education

or training, relevant to the duties of a marine engineer;

 (d) have completed an adequate period of sea-going service which

may have been included within the period of three years stated in

sub-paragraph (c);

 (e) satisfy the Administration that he has the theoretical and

practical knowledge of the operation and maintenance of marine machinery

appropriate to the duties of an engineer officer;

 (f) have attended an approved practical fire-fighting course;

 (g) have knowledge of safe working practices.

 The Administration may vary the requirement of sub-paragraphs (c) and

(d) for engineer officers of ships powered by main propulsion machinery of

less than 3000 kW propulsion power engaged on near-coastal voyages,

bearing in mind the effect on the safety of all ships which may be

operating in the same waters.

 3. Every candidate shall have knowledge of the operation and

maintenance of main and auxiliary machinery, which shall include knowledge

of relevant regulatory requirements and also knowledge of at least the

following specific items:

 (a) Watchkeeping routines

 (i) duties associated with taking over and accepting a watch;

 (ii) routine duties undertaken during a watch;

 (iii) maintenance of the machinery space log book and the

significance of readings taken;

 (iv) duties associated with handing over a watch.

 (b) Main and auxiliary machinery

 (i) assisting in the preparation of main machinery and preparation

of auxiliary machinery for operation;

 (ii) operation of steam boilers, including combustion system;

 (iii) methods of checking water level in steam boilers and action

necessary if water level is abnormal;

 (iv) location of common faults of machinery and plant in engine

and boiler rooms and action necessary to prevent damage.

 (c) Pumping systems

 (i) routine pumping operations;

 (ii) operation of bilge, ballast and cargo pumping systems.

 (d) Generating plant

 Preparing, starting, coupling and changing over alternators or

generators.

 (e) Safety and emergency procedures

 (i) safety precautions to be observed during a watch and immediate

actions to be taken in the event of a fire or accident, with particular

reference to oil systems.

 (ii) safe isolation of electrical and other types of plant and

equipment required before personnel are permitted to work on such plant

and equipment.

 (f) Anti-pollution procedures

 The precautions to be observed to prevent pollution of the

environment by oil, cargo residue, sewage, smoke or other pollutants. The

use of pollution prevention equipment, including oily water separators,

sludge tank systems and sewage disposal plant.

 (g) First aid

 Basic first aid related to injuries which might be expected in

machinery spaces.

 4. Where steam boilers do not form part of a ship\'s machinery, the

Administration may omit the knowledge requirements of paragraphs 3 (b)

(ii) and (iii). A certificate awarded on such a basis shall not be valid

for service on ships in which steam boilers form part of a ship\'s

machinery until the engineer officer proves to be competent in the omitted

items to the satisfaction of the Administration. Any such limitations

shall be stated in the certificate.

 5. The training to achieve the necessary theoretical knowledge and

practical experience shall take into account relevant international

regulations and recommendations.

 Regulation III/5 Mandatory Minimum Requirements to Ensure the Con-tinued Proficiency and Updating of Knowledge for Engineer Officers

 1. Every engineer officer holding a certificate who is serving at sea

or intends to return to sea after a period ashore shall, in order to

continue to qualify for sea-going service in the rank appropriate to his

certificate, be required at regular intervals not exceeding five years to

satisfy the Administration as to:

 (a) medical fitness, including eyesight and hearing; and

 (b) professional competence:

 (i) by approved service as an engineer officer of at least one

year during the preceding five years; or

 (ii) by virtue of having performed functions relating to the

duties appropriate to the grade of certificate held which is considered to

be at least equivalent to the seagoing service required in paragraph 1(b)

 (i); or

 (iii) by one of the following:

 -passing an approved test; or

 -successfully completing an approved course or courses; or

 -having completed approved sea-going service as an engineer

officer for a period of not less than three months in a supernumerary

capacity; or in a lower rank than that for which he holds the certificate,

immediately prior to taking up the rank to which he is entitled by virtue

of his certificate.

 2. The course or courses referred to in paragraph 1 (b) (iii) shall

include, in particular, changes in the relevant international regulations

and recommendations concerning the safety of life at sea and the

protection of the marine environment.

 3. The Administration shall ensure that the texts of recent changes in

international regulations concerning the safety of life at sea and the

protection of the marine environment are made available to ships under its

jurisdiction.

 Regulation III/6 Mandatory Minimum Requirements for Ratings Form-ing Part of an Engine Room Watch

 1. The minimum requirements for a rating if forming part of an engine

room watch shall be set out in paragraph 2. These requirements are not

for:

 (a) a rating nominated as the assistant to the engineer officer in

charge of the watch;

 (b) a rating who is under training;

 (c) a rating whose duties while on watch are of an unskilled nature.

 2. Every rating forming part of an engine room watch shall:

 (a) be not less than 16 years of age;

 (b) satisfy the Administration as to medical fitness, including

eyesight and hearing;

 (c) satisfy the Administration as to:

 (i) experience or training regarding fire-fighting, basic first

aid, personal survival techniques, health hazards and personal safety;

 (ii) ability to understand orders, and make himself understood in

matters relevant to his duties;

 (d) satisfy the Administration that he has:

 (i) shore experience relevant to his sea-going duties supplemented

by an adequate period of sea-going service as required by the

Administration; or

 (ii) undergone special training either pre-sea or on board ship,

including an adequate period of sea-going service as required by the

Administration; or

 (iii) approved sea-going service of at least six months.

 3. Every such rating shall have knowledge of:

 (a) engine room watchkeeping procedures and the ability to carry

out a watch routine appropriate to his duties;

 (b) safe working practices as related to engine room operations;

 (c) terms used in machinery spaces and names of machinery and

equipment relative to his duties;

 (d) basic environmental protection procedures.

 4. Every rating required to keep a boiler watch shall have knowledge

of the safe operation of boilers, and shall have the ability to maintain

the correct water levels and steam pressures.

 5. Every rating forming part of an engine room watch shall be familiar

with his watchkeeping duties in the machinery spaces on the ship on which

he is to serve. In particular, with respect to that ship the rating shall

have:

 (a) knowledge of the use of appropriate internal communication

systems;

 (b) knowledge of escape routes from machinery spaces;

 (c) knowledge of engine room alarm systems and ability to

distinguish between the various alarms with special reference to fire

extinguishing gas alarms;

 (d) familiarity with the location and use of fire-fighting

equipment in the machinery spaces.

 6. A seafarer may be considered by the Administration to have met the

requirements of this Regulation if he has served in a relevant capacity in

the engine department for a period of not less than one year within the

last five years preceding the entry into force of the Convention for that

Administration.

 CHAPTER IV. RADIO DEPARTMENT RADIO WATCHKEEPING AND MAINTENANCE

 Explanatory note:

 Mandatory provisions relating to radio watchkeeping are set forth in

the Radio Regulations, and the safety radio watchkeeping and maintenance

provisions are set forth in the International Convention for the Safety of

Life at Sea and in the Radio Regulations, are these two sets of

Regulations may be amended and are in force. Attention is also directed to

the relevant resolutions adopted by the International Conference on

Training and Certification of Seafarers, 1978.

 Regulation IV/1 Mandatory Minimum Requirements for CertificationofRadio Officers

 1. Every radio officer in charge of, or performing, radio duties in a

ship shall hold an appropriate certificate or certificates issued or

recognised by the Administration under the provisions of the Radio

Regulations, and have adequate qualifying service.

 2. In addition, a radio officer shall:

 (a) be not less than 18 years of age;

 (b) satisfy the Administration as to medical fitness, particularly

regarding eyesight, hearing and speech;

 (c) meet the requirements of the Appendix to this Regulation.

 3. Every candidate for a certificate shall be required to pass an

examination or examinations to the satisfaction of the Administration

concerned.

 4. The level of knowledge required for certification shall be

sufficient for the radio officer to carry out this radio duties safely and

efficiently. In determining the appropriate level of knowledge and the

training necessary to achieve that knowledge and practical ability, the

Administration shall take into account the requirements of the Radio

Regulations and the Appendix to this Regulation. Administrations shall

also take into account the relevant resolutions adopted by the

International Conference on Training and Certification of Seafarers, 1978,

and relevant IMCO recommendations.

 APPENDIX TO REGULATION IV/1 MINIMUM ADDITIONAL KNOWLEDGE AND TR-AINING REQUIREMENTS FOR RADIO OFFICERS

 In addition to satisfying the requirements for the issue of a

certificate in compliance with the Radio Regulations, radio officers shall

have knowledge and training, including practical training, in the

following:

 (a) the provision of radio services in emergencies, including:

 (i) abandon ship;

 (ii) fire aboard ship;

 (iii) partial or full breakdown of the radio station;

 (b) the operation of lifeboats, liferafts, buoyant apparatus and

their equipment, with special reference to portable and fixed lifeboat

radio apparatus and emergency position-indicating radio beacons;

 (c) survival at sea;

 (d) first aid;

 (e) fire prevention and fire-fighting with particular reference to

the radio installation;

 (f) preventive measures for the safety of ship and personnel in

connexion with hazards related to radio equipment, including electrical,

radiation, chemical and mechanical hazards;

 (g) the use of the IMCO Merchant Ship Search and Rescue Manual

(MERSAR) with particular reference to radiocommunications;

 (h) ship position-reporting systems and procedures;

 (i) the use of the International Code of Signals and the IMCO

Standard Marine Navigational Vocabulary;

 (j) radio medical systems and procedures.

 Regulation IV/2 Mandatory Minimum Requirements to Ensure the Con-tinued Proficiency and Updating of Knowledge for Radio Officers

 1. Every radio officer holding a certificate or certificates issued or

recognized by the Administration shall, in order to continue to qualify

for sea-going service, be required to satisfy the Administration as to the

following:

 (a) medical fitness, particularly regarding eyesight, hearing and

speech, at regular intervals not exceeding five years; and

 (b) professional competence:

 (i) by approved radiocommunications service as a radio officer

with no single interruption of service exceeding five years;

 (ii) following such interruption, by passing an approved test

or successfully completing an approved training course or courses at sea

or ashore, which shall include elements that are of direct relevance to

the safety of life at sea and modern radiocommunication equipment and may

also include radionavigation equipment.

 2. When new modes, equipment or practices are being introduced aboard

ships entitled to fly its flag, the Administration may require radio

officers to pass an approved test or successfully complete an appropriate

training course or courses, at sea or ashore, with particular reference to

safety duties.

 3. Every radio officer shall, to continue to qualify for sea-going

service on board particular types of ships for which special training

requirements have been internationally agreed upon, successfully complete

approved relevant training or examinations which shall take into account

relevant international regulations and recommendations.

 4. The Administration shall ensure that the texts of recent changes in

international regulations relating to radiocommunications and relevant to

the safety of life at sea, are available to ships under its jurisdiction.

 5. Administrations are encouraged, in consultation with those

concerned, to formulate or promote the formulation of a structure of

refresher and updating courses, either voluntary or mandatory, as

appropriate, at sea or ashore, for radio officers who are serving at sea

and especially for re-entrants to sea-going service. The course or courses

shall include elements that are of direct relevance to radio duties and

include changes in marine radiocommunication technology and relevant

international regulations and recommendations concerning the safety of

life at sea.

 Regulation IV/3 Mandatory Minimum Requirements for CertificationofRadiotelephone Operators

 1. Every radiotelephone operator in charge of, or performing, radio

duties in a ship shall hold an appropriate certificate or certificates

issued or recognized by the Administration under the provisions of the

Radio Regulations.

 2. In addition, such radiotelephone operator of a ship which is

required to have a radiotelephone station by the International Convention

for the Safety of Life at Sea, shall:

 (a) be not less than 18 years of age;

 (b) satisfy the Administration as to medical fitness, particularly

regarding eyesight, hearing and speech;

 (c) meet the requirements of the Appendix to this Regulation.

 3. Every candidate for a certificate shall be required to pass an

examination or examinations to the satisfaction of the Administration

concerned.

 4. The level of knowledge required for certification shall be

sufficient for the radiotelephone operator to carry out his radio duties

safely and efficiently. In determining the appropriate level of knowledge

and the training necessary to achieve that knowledge and practical

ability, the Administration shall take into account the requirements of

the Radio Regulations and the Appendix to this Regulation. Administrations

shall also take into account the relevant resolutions adopted by the

International Conference on Training and Certification of Seafarers 1978,

and relevant IMCO recommendations.

 APPENDIX TO REGULATION IV/3 MINIMUM ADDITIONAL KNOWLEDGE AND TR-AINING REQUIREMENTS FOR RADIOTELEPHONE OPERATORS

 In addition to satisfying the requirements for the issue of a

certificate in compliance with the Radio Regulations, radiotelephone

operators shall have knowledge and training, including practical training,

in the following:

 (a) the provision of radio services in emergencies, including:

 (i) abandon ship;

 (ii) fire aboard ship;

 (iii) partial or full breakdown of the radio station;

 (b) the operation of lifeboats, liferafts, buoyant apparatus and

their equipment, with special reference to portable and fixed lifeboat

radio apparatus and emergency position-indicating radio beacons;

 (c) survival at sea;

 (d) first aid;

 (e) fire prevention and fire-fighting with particular reference to

the radio installation;

 (f) preventive measures for the safety of ship and personnel in

connexion with hazards related to radio equipment, including electrical,

radiation, chemical and mechanical hazards;

 (g) the use of the IMCO Merchant Ship Search and Rescue Manual

(MERSAR) with particular reference to radiocommunications;

 (h) ship position-reporting systems and procedures;

 (i) the use of the International Code of Signals and the IMCO

Standard Marine Navigational Vocabulary;

 (j) radio medical systems and procedures.

 CHAPTER V. SPECIAL REQUIREMENTS FOR TANKERS

 Regulation V/1 Mandatory Minimum Requirements for the Training andQualifications of Masters, Officers and Ratings of Oil Tankers

 1. Officers and ratings who are to have specific duties, and

responsibilities related to those duties, in connexion with cargo and

cargo equipment on oil tankers and who have not served on board an oil

tanker as part of the regular complement, before carrying out such duties

shall have completed an appropriate shore-based fire-fighting course; and

 (a) an appropriate period of supervised shipboard service in order

to acquire adequate knowledge of safe operational practices; or

 (b) an approved oil tanker familiarization course which includes

basic safety and pollution prevention precautions and procedures, layouts

of different types of oil tankers, types of cargo, their hazards and their

handling equipment, general operational sequence and oil tanker

terminology.

 2. Masters, chief engineer officers, chief mates, second engineer

officers and, if other than the foregoing, any person with the immediate

responsibility for loading, discharging and care in transit or handling of

cargo, in addition to the provisions of paragraph 1, shall have:

 (a) relevant experience appropriate to their duties on oil

tankers; and

 (b) completed a specialized training programme appropriate to

their duties, including oil tanker safety, fire safety measures and

systems, pollution prevention and control, operational practice and

obligations under applicable laws and regulations.

 3. Within two years after the entry into force of the Convention for a

Party, a seafarer may be considered to have met the requirements of

paragraph 2(b) if he has served in a relevant capacity on board oil

tankers for a period of not less than one year within the preceding five

years.

 Regulation V/2 Mandatory Minimum Requirements for the Training andQualifications of Masters, Officers and Ratings of Chemical Tankers

 1. Officers and ratings who are to have specific duties, and

responsibilities related to those duties, in connexion with cargo and

cargo equipment on chemical tankers and who have not served on board a

chemical tanker as part of the regular complement, before carrying out

such duties shall have completed an appropriate shore-based fire-fighting

course; and

 (a) an appropriate period of supervised shipboard service in order

to acquire adequate knowledge of safe operational practices; or

 (b) an approved chemical tanker familiarization course which

includes basic safety and pollution prevention precautions and procedures,

layouts of different types of chemical tankers, types of cargo, their

hazards and their handling equipment, general operational sequence and

chemical tanker terminology.

 2. Masters, chief engineer officers, chief mates, second engineer

officers and, if other than the foregoing, any person with the immediate

responsibility for loading, discharging and care in transit or handling of

cargo, in addition to the provisions of paragraph 1, shall have:

 (a) relevant experience appropriate to their duties on chemical

tankers; and

 (b) completed a specialized training programme appropriate to

their duties including chemical tanker safety, fire safety measures and

systems, pollution prevention and control, operational practice and

obligations under applicable laws and regulations.

 3. Within two years after the entry into force of the Convention for a

Party, a seafarer may be considered to have met the requirements of

paragraph 2 (b) if he has served in a relevant capacity on board chemical

tankers for a period of not less than one year within the preceding five

years.

 Regulation V/3 Mandatory Minimum Requirements for the Training andQualifications of Masters, Officers and Ratings of Liquefied Gas Tankers

 1. Officers and ratings who are to have specific duties, and

responsibilities related to those duties, in connexion with cargo and

cargo equipment on liquefied gas tankers and who have not served on board

a liquefied gas tanker as part of the regular complement, before carrying

out such duties shall have completed an appropriate shore-based

fire-fighting course; and

 (a) an appropriate period of supervised shipboard service in order

to acquire adequate knowledge of safe operational practices; or

 (b) an approved liquefied gas tanker familiarization course which

includes basic safety and pollution prevention precautions and procedures,

layouts of difference types of liquefied gas tankers, types of cargo,

their hazards and their handling equipment, general operational sequence

and liquefied gas tanker terminology.

 2. Masters, chief engineer officers, chief mates, second engineer

officers and, if other than the foregoing, any person with the immediate

responsibility for loading, discharging and care in transit or handling of

cargo, in addition to the provisions of paragraph 1, shall have:

 (a) relevant experience appropriate to their duties on liquefied

gas tankers; and

 (b) completed a specialized training programme appropriate to

their duties including liquefied gas tanker safety, fire safety measures

and systems, pollution prevention and control, operational practice and

obligations under applicable laws and regulations.

 3. Within two years after the entry into force of the Convention for a

Party, a seafarer may be considered to have met the requirements of

paragraph 2(b) if he has served in a relevant capacity on board liquefied

gas tankers for a period of not less than one year within the preceding

five years.

 CHAPTER VI. PROFICIENCY IN SURVIVAL CRAFT

 Regulation VI/1 Mandatory Minimum Requirements for the Issue ofCertificates of Proficiency in Survival Craft

 Every seafarer to be issued with a certificate of proficiency in

survival craft shall:

 (a) be not less than 17 1/2 years of age;

 (b) satisfy the Administration as to medical fitness;

 (c) have approved sea-going service of not less than 12 months or

have attended an approved training course and have approved sea-going

service of not less than nine months;

 (d) satisfy the Administration by examination or by continuous

assessment during an approved training course that he possesses knowledge

of the contents of the Appendix to this Regulation;

 (e) demonstrate to the satisfaction of the Administration by

examination or by continuous assessment during an approved training course

that he possesses the ability to:

 (i) don a life-jacket correctly; safely jump from a height

into the water; board a survival craft from the water while wearing a

life-jacket;

 (ii) right an inverted liferaft while wearing a life-jacket;

 (iii) interpret the markings on survival craft with respect to

the number of persons they are permitted to carry;

 (iv) make the correct commands required for launching and

boarding the survival craft, clearing the ship and handling and

disembarking from the survival craft;

 (v) prepare and launch survival craft safely into the water

and clear the ship\'s side quickly;

 (vi) deal with injured persons both during and after

abandonment;

 (vii) row and steer, erect a mast, set the sails, manage a

boat under sail and steer a boat by compass;

 (viii) use signalling equipment, including pyrotechnics;

 (ix) use portable radio equipment for survival craft.

 APPENDIX TO REGULATION VI/I MINIMUM KNOWLEDGE REQUIRED FOR THE IS-SUE OF CERTIFICATES OF PROFICIENCY IN SURVIVAL CRAFT

 1. Types of emergency situations which may occur, such as collisions,

fire, foundering.

 2. Principles of survival including:

 (a) value of training and drills;

 (b) need to be ready for any emergency;

 (c) actions to be taken when called to survival craft stations;

 (d) actions to be taken when required to abandon ship;

 (e) actions to be taken when in the water;

 (f) actions to be taken when aboard a survival craft;

 (g) main dangers to survivors.

 3. Special duties assigned to each crew member as indicated in the

muster list, including the differences between the signals calling all

crew to survival craft and to fire stations.

 4. Types of life-saving appliances normally carried on board ships.

 5. Construction and outfit of survival craft and individual items of

their equipment.

 6. Particular characteristics and facilities of survival craft.

 7. Various types of devices used for launching survival craft.

 8. Methods of launching survival craft into a rough sea.

 9. Action to be taken after leaving the ship.

 10. Handling survival craft in rough weather.

 11. Use of painter, sea anchor and all other equipment.

 12. Apportionment of food and water in survival craft.

 13. Methods of helicopter rescue.

 14. Use of the first aid kit and resuscitation techniques.

 15. Radio devices carried in survival craft, including emergency

position-indicating radio beacons.

 16. Effects of hypothermia and its prevention; use of protective

covers and protective garments.

 17. Methods of starting and operating a survival craft engine and its

accessories together with the use of fire extinguisher provided.

 18. Use of emergency boats and motor lifeboats for marshalling

liferafts and rescue of survivors and persons in the sea.

 19. Beaching a survival craft.