

AMERICAN PILOTS' ASSOCIATION

**GUIDELINES FOR RENEWAL COURSES IN
BRIDGE RESOURCE MANAGEMENT
FOR MARINE PILOTS**
(Revised 11/ 3/ 2000)

Introduction

In October, 1993, the American Pilots' Association recommended that all APA member pilots should take an APA-approved course in Bridge Resource Management for Marine Pilots (BRM-P) and should take a renewal BRM-P course at least once every three years. Guidelines for BRM-P courses were established at the same time, and a number of courses have been approved by the APA since then. On November 3, 2000 the 1993 Resolution was amended to change the recommended renewal cycle from three to five years.

This program has been successful. The APA estimates that over 95% of its member pilots have taken an initial BRM-P course. Many of these pilots are approaching, or have already reached, the end of the first renewal cycle. They are ready for a renewal BRM-P course. It is clear that simply repeating a previous BRM-P course would not be worthwhile. Consequently, there is a need for the schools with APA-approved BRM-P courses to develop and offer courses specifically designed for pilots who have already taken a BRM-P course, and the APA would encourage the schools to offer separate initial and renewal courses, each of which would be APA-approved.

Schools with an APA-approved BRM-P course are presumed to recognize that a BRM course for pilots should differ in certain important respects from a BRM course for ships' crews. APA member pilots expect that an APA-approved BRM-P course, whether initial or renewal, will address the role and unique challenges of the pilot. In this regard, course providers should consult the APA's October 5, 1993 "Guidelines for Bridge Resource Management Courses for Marine Pilots." The APA anticipates that renewal courses will meet both the 1993 Guidelines as well as the present guidelines for renewal courses.

Obviously, a renewal course will require a somewhat different approach than an initial course. For example, instructors in a renewal course should assume that the pilots in the course have an understanding of basic BRM concepts, such as situational awareness, error chains, and human factors affecting communication, cooperation and pilot-bridge crew integration. As a result, those concepts can be reviewed, expanded, and updated with new information and theories, but there would be no need to repeat the exercises or case histories used to introduce those concepts. Essentially, a renewal course should focus on developments in the BRM field over the preceding five years.

The APA invites the submission of, and will give approval for, renewal courses meeting the following guidelines:

1. Course Should be Designed Specifically for Pilots Who Have Already Had a BRM-P Course.

The course should assume that the participants already have had a course in BRM-P and are familiar with basic BRM concepts and how they apply to the specific functions, tasks, experiences, and needs of pilots.

2. Objectives of Course.

In terms of the knowledge and benefits to be gained by the participants, the objectives of the course are essentially the same as for an initial BRM-P course. In addition, the participants' understanding of BRM should be expanded through instruction in developments in the subject of BRM during the preceding five years as a result of accidents, research (in such things as fatigue and cultural and language barriers), developments in technology and information resources and regulatory changes.

3. Length of Course.

The course should be two days (14-16 hours), although an acceptable course might be expanded beyond two days, provided that the focus remains on BRM. Additional training in other areas of professional development might be offered in conjunction with the BRM-P course.

4. Curriculum.

The course should include instruction/training in the subject areas identified in the APA Guidelines. Basic BRM concepts such as situational awareness, error chains, special problems of pilot-bridge crew integration, and human factors affecting individual and group performance, can be reviewed and then updated or supplemented with more recent developments in those subject areas. Particular attention could be given to:

- a. Developments in technology and information resources, e.g.:
 - electronic charts, ECDIS, and NOAA products,
 - integrated bridge systems and new bridge lay-outs,
 - GPS/DGPS systems (shipboard and pilot supplied),
 - VTS systems, traditional and those using Automated Independent Surveillance (AIS),
 - advanced tug designs (e.g., tractor tugs) and procedures
 - advanced shipboard control systems (such as azipod propulsion)
- b. Reports of accidents from preceding five years;
- c. APA positions on "The Respective Roles and Responsibilities of the Pilot and the Master," "The Master-Pilot Information Exchange," and other relevant matters;

- d. Research on fatigue, cognitive science, and other human factors;
- e. Regulatory requirements governing respective duties of master and bridge crew and pilot (e.g., STCW, SOLAS, 33 CFR Parts 164 and 165);
- f. New regulations possibly requiring a change in bridge procedures;
- g. Potential impact of ISM Code and STCW measures on the competence and operations of masters and bridge crews; and
- h. Positions and proposals of other organizations on master-pilot interaction, bridge team management, bridge procedures with pilot aboard, etc.

5. Class Size and Instruction Methods.

Class size should be between 5 and 30 individuals. Although recent developments in BRM matters, such as research in human factors, changes in regulatory requirements, and technological advances, may justify more lecture-type instruction than would be advisable for initial BRM-P courses, a significant portion of a renewal BRM-P course should be conducted with interactive instruction methods and encourage discussion. This helps to ensure that the subject matter maintains its relevancy to the pilot experience. Case studies using accident reports are particularly appropriate, just as they are for initial BRM-P courses.

6. Sponsors and Instructors.

A renewal BRM-P course should be offered by a recognized maritime academy, training center or other school or institute or an individual engaged in the business of offering training and instruction to licensed marine officers. Instructors for BRM-P courses should have specific training in BRM concepts. In addition, an instructor should have either professional training as a facilitator in workshop type instruction methods or have experience as a pilot on large, foreign-flag commercial ships. A licensed mariner, former naval officer, or Coast Guard active duty or retired officer with neither training as a workshop facilitator nor experience as a pilot on foreign-flag commercial ships would not ordinarily be an acceptable instructor.

7. Use of a simulator.

A simulator is not necessary for a renewal BRM-P course, *although simulation may enhance the understanding of BRM-P concepts*. Simulator exercises could be incorporated into a renewal course or offered in conjunction with such a course, however. Ideally, such simulator exercises should be conducted with the actual or similar ships' crews that the pilots would encounter in their pilotage activities or with pilots playing the roles of such crew members. Simulator exercises could cover, among other things, bridge organizational skills and task allocation in emergency situations or difficult navigational scenarios.