Marine fires: preventing them; fighting them

by Edward J. Condon
Extension Oceanographer
Oregon State University

Fire is one of a mariner's greatest fears—whether the vessel be large or small. The cost of marine firefighting systems totals several millions of dollars, and small vessels ordinarily put to sea with a few minimums of firefighting equipment. The common mistakes made in this sphere of marine fire prevention have already caused extensive damage.
Test yourself: can you remember your own knowledge and experience better than the test? (Notice that it is, in fact, more than two questions for this test.)

5. What type of extinguishers should I stock? For what types of fires?

2. When was the last time I...?

3. Should I fight the fire first—and then call for help? Or should I first call for help and then fight the fire?

Test yourself the average. Whether that's so or not, the fiberglass insulation—

• checked for LPG (propane)

• the grease out of the galley

• lube oil leaks, and proper

• exhaust ventilators—for engine

• improperly stowed equipment,

• lube oil leaks

• exhaust stack fire (poor or no

• connections

• lube oil leaks or fumes in enclosed spaces?

• carburetion for galley stove?

• CO2 leaves no residue, you can put

• a spray

• CO2 in an enclosed space (where it

• a mixture of LPG and air)

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• the boat carries

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3. Should I fight the fire first—and then...

4. Am I familiar enough with locations...

5. the average. Whether that's so or not,

If the fire should break out in my...

You may consider your crew's...

my mates about smoking...

checked ior LIP G

• the grease out of the galley

• exhaust stack fire (poor or no

• grease fire on cook stove

— or would its power source be

to call for help? Would the radio

engine room, house, galley, sleeping

operating procedures of all the intake

of them if fire breaks out?

• improperly stowed equipment,

• exhaust stack fire (poor or no

• grease fire on cook stove

backwards

shorting batteries in a seaway

fires:

back over those test questions, take notes,

What

caused numerous shipboard fires.

these "When was the last time"

steps has

disadvantages of the various types of

areas

• exhaust stack fire (poor or no

• grease fire on cook stove

and hand-pump extinguishers.

Firefighting nozzles

Find a good supplier and ask about

amount of spray—and patience.

you direct a blanket of it at a fire, the

it smothers it.

not cool the fire

CO2 leaves no residue, you can put

the fire will not cause the fire to

CO2 blanket on the fire long enough

of the fire will not cause the fire to

of the fire will not cause the fire to

CO2 leaves no residue, you can put

the fire will not cause the fire to

2

8

9

Table 1—Basic firefighting systems and how to use them

<table>
<thead>
<tr>
<th>System</th>
<th>Advantages</th>
<th>Disadvantages</th>
<th>Types of fire to use it on</th>
<th>Where to use it</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water (hose, pump) (fire extinguishers)</td>
<td>Cool the fire.</td>
<td>High chance of water damage. Does not absorb the fire.</td>
<td>Wood, mattresses, paper.</td>
<td>Topside</td>
</tr>
<tr>
<td>Carbon dioxide (CO2)</td>
<td>Efficiently cool the fire.</td>
<td>Cannot be used on electrical or gas fires.</td>
<td>Electrical, engine, engine-room fires.</td>
<td>Engine-room spaces.</td>
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This dry-chemical extinguisher is SG 44, Marine fires: Preventing them; fighting them, If you were to apply this Pyrene get rid of it! Yet another dangerous type, carbon tetrachloride. Get rid of this one, too, systems.)

C02 reportedly heavier than C02, making it. Halon is than you can with C02 system; however, suggests that your initial cost would be 2 does C02 powder into a space, it will cover long enough for nearby hot surfaces to cool—or the fire will reflash. Correct position. Very fine powder. 1. So long as you use the extinguisher in upright constructed, there are some physical


Another title in the series

The best bet for small ships and boats is an essential fire-prevention program from the start in paying for the fire. Remember that frayed wiring, grease oil buildup, and slow fuel drips or leaks could cost you your boat— and maybe your life. Consider these statistics

The common denominator between fires is an energetic fore-prevention system; small vessels usually have only one chance to put out a fire. If they miss or muff that opportunity, they may well not have another before the craft is totally lost. Small craft have limited firefighting equipment, few people on board, and probably little knowledge of firefighting techniques. Here's a good rule of thumb: On any ship, when there is in sight of a burning fire, the chances are your craft will be totally destroyed.


8. Oregon State University Extension Marine Advisory Program

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Marine fires: preventing them; fighting them by Edward J. Condon Extension Oceanographer Oregon State University

Fire is one of a mariner's greatest fears— whether the vessel is large or small. In 1975, the U.S. Coast Guard reported $250,000 losses. The loss was about $250,000. Photo by Norman Holm, Kodiak, Alaska. The Crabber Citrus buoy-tender caught fire while at sea, April 1976. The U.S. Coast Guard

Firefighting equipment on small ships and boats is usually simple and not extensive; yet the damage resulting from a fire can be tremendous.