ASTM Seminar on Fire Testing for SOLAS and Navy Vessels

U.S. Coast Guard Approval Process

By

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**U.S. Coast Guard Approval Process**

Outline

- Respective role of IMO and USCG
- FTP Code revision process
- Schedule for Phase-in of 2010 FTP Code
- Effect on existing approvals - Q&A
- USCG type-approval process
- Relation of FTP Code parts to USCG Approval Series
- Q&A (followed by FTP Code annexes)
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Regulatory Evolution

- 1838 Steamboat inspections by Court-appointed inspectors
- 1852 Steamboat Act – inspections by Dept. of Treasury
- 1871 Steamboat Inspection Service
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Regulatory Evolution

- 1912 RMS TITANIC
- 1914 International Convention for the Safety of Life at Sea
- The War to End all Wars
- 1929 2nd International Convention for the Safety of Life at Sea
- 1945 United Nations
- 1948 Inter-governmental Marine Consultative Organization
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International Maritime Organization (IMO)

- Formerly Inter-governamental Marine Consultative Organization
- Specialized agency of the United Nations
- 170 Member States
- 63 Inter-Governmental Observers
- 83 Non-Governmental Observers
- International Convention for Safety of Life at Sea (SOLAS)
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Maritime Regulatory Roles

- International Convention for Safety of Life at Sea (SOLAS)
  - International Code for Application of Fire Test Procedures (FTP Code)

- IMO as a forum

- Administrations as enforcers
  - Flag State
  - Port State
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FTP Code Revision

- January 2005 - Proposed to IMO by Japan
- January 2006 – FP 50 establishes 1st correspondence group
- February 2007 – 1st Working Group meeting
- January 2008 – 2nd Working Group meeting
- February 2009 – 3rd Working Group meeting
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FTP Code Revision

IMO Correspondence Group → USCG

USCG → US correspondence group
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FTP Code Revision

IMO Correspondence Group

IMO Working Group

USCG

US correspondence group
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2010 FTP Code Implementation

- Adopted 3 December 2010
- Publish in March 2012 by IMO
- Becomes effective 1 July 2012
- 1-year grace period to transition test equipment
- New test procedures are mandatory on 1 July 2013
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Effect on Approvals

- Minimal effect overall
- Approvals continue to be for 5 years
- May renewed without retesting
  - No changes in product
  - Test report is not more than 15 years old at renewal
- Retesting must use test procedures in effect at renewal
- Interpretation of Administration
- QUESTIONS
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Approval Types

- Type approval
  - Good for 5 years
  - May be renewed
  - Product appears on approved equipment lists

- Case-by-case approval
  - Used to provide regulatory flexibility
  - Test report must be less than 2-year old
  - Approval is specific to a vessel
  - Issued only by the Flag Administration or its agents
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Reason for Approvals

Type Approval → Plan Review

Field Inspection
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Approval Basics

- U.S. Coast Guard does not charge for issuing approvals
- Manufacturer responsible for cost associated with laboratory
  - Cost of testing
  - Cost of follow-up service
- Independent laboratory acceptable to U.S. Coast Guard
  - Meets 46 CFR 159.010
  - USCG will accept test report for review
  - Is not an agent of USCG
  - http://cgmix.uscg.mil
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Approval Basics

- Certificate of Approval is valid for 5 years.
  - Specific product
  - Manufacturing location
- Product can not be changed without prior written agreement of change.
- Must have valid approval when manufactured.
- Once installed, may remain in service as long as it is serviceable.
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Follow-up Program

- Navigation And Vessel Inspection Circular No. 02-06
- Performed by the laboratory conducting the approval tests
- At least an annual audit
- Requires an annual performance test
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Type Approval Process

- Identify the appropriate approval series for the product
- Choose an independent laboratory
  - Acceptable to USCG
  - Scope includes that approval series
- Laboratory selects test specimens and audits production
- Laboratory conducts tests and develops follow-up program
- Manufacturer responsible for submitting request for approval
- USCG reviews request and issues approval
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Pitfalls

- Told lab you wanted USCG approval after testing is complete.
- Went to a laboratory not on our list for that approval series.
- They want what for follow-up?
- Waited too long after testing to request approval.
- Your intended customer will not accept the approval.
- Paid for admission to the party to find an empty room.
- Did not talk to us.
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### FTP Code related Approval Series

<table>
<thead>
<tr>
<th>Grouping</th>
<th>Series</th>
<th>Parts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>164.109 Non-combustible material</td>
<td>1 &amp; 5</td>
</tr>
<tr>
<td>Construction &amp;</td>
<td>164.105 Deck assembly (IMO)</td>
<td>1, 3 &amp; 5</td>
</tr>
<tr>
<td>barriers</td>
<td>164.107 Structural insulation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>164.108 Bulkhead panels</td>
<td></td>
</tr>
<tr>
<td></td>
<td>164.110 Structural ceiling</td>
<td></td>
</tr>
<tr>
<td></td>
<td>164.136 Fire doors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>164.137 Windows</td>
<td></td>
</tr>
<tr>
<td></td>
<td>164.138 Penetration seals</td>
<td></td>
</tr>
<tr>
<td></td>
<td>164.139 Dampers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>164.207 Fire-resisting division for high speed craft</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>164.146 Fire door control systems</td>
<td>1 &amp; 4</td>
</tr>
</tbody>
</table>
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## FTP Code related Approval Series

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<th>Grouping</th>
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</thead>
<tbody>
<tr>
<td>Surface Finishes</td>
<td>164.106 Primary deck coverings</td>
<td>2 &amp; 5</td>
</tr>
<tr>
<td></td>
<td>164.112 Interior finish</td>
<td></td>
</tr>
<tr>
<td></td>
<td>164.117 Floor coverings</td>
<td></td>
</tr>
<tr>
<td></td>
<td>164.201 Fire restricting materials for high speed craft</td>
<td>10</td>
</tr>
<tr>
<td>Furnishings</td>
<td>164.111 Drapes/suspended textiles</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>164.144 Upholstered furniture</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>164.142 Bedding components</td>
<td>9</td>
</tr>
<tr>
<td>Associated items</td>
<td>164.141 Fiber reinforced plastic piping</td>
<td>2 &amp; 5</td>
</tr>
<tr>
<td></td>
<td>164.040 Fiber reinforced plastic grating</td>
<td>5</td>
</tr>
</tbody>
</table>
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Resources

- Lifesaving and Fire Safety Division (CG-5214)
  http://www.uscg.mil/hq/cg5/cg5214/

- U.S. Coast Guard Maritime Information eXchange
  http://cgmix.uscg.mil

- Emailing of requests or questions: TypeApproval@uscg.mil

- QUESTIONS?
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Annexes of the FTP Code

- Annex 1 - Fire test procedures
- Annex 2 - Products which may be installed without testing and/or approval
- Annex 3 - Fire protection materials and required approval test methods
  - Table 1 – HSC and PV > 36 passengers
  - Table 2 – Cargo ships
- Annex 4 - Interpretation of SOLAS chapter II-2, regulations 5.3 and 6.2 (MSC/Circ.1120)
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Annex 2 of the FTP Code

- Inherently noncombustible materials do not need testing.
- Noncombustible materials do not need to be tested to Part 2 and Part 5
- Very good performance in Part 5
  - Exempt from Part 2
  - Exempt from limitation on calorific content (ISO 1716)
- Fire-restricting materials (Part 10) for HSC deemed to comply with Part 2
**Annex 4 of FTP Code**

Table 1 - Materials used on passenger ships for bulkheads of accommodation spaces as defined in regulation II-2/3.1 and its requirements (regulations 5.3 and 6.2)

<table>
<thead>
<tr>
<th>Bulkhead components</th>
<th>Materials used for bulkheads of accommodation spaces as defined in SOLAS chapter II-2 for components</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Requirements in SOLAS chapter II-2 for components</td>
</tr>
<tr>
<td></td>
<td>Non-combustible material (5.3.1.1) (5.3.1.1.2.1) Calorific value (5.3.2.2) Equivalent volume (5.3.2.3) Low flame-spread (5.3.2.4) Smoke production, toxic products (6.2)</td>
</tr>
<tr>
<td>1 moulding</td>
<td>X</td>
</tr>
<tr>
<td>2 wall panel (lining)</td>
<td>X</td>
</tr>
<tr>
<td>3 grounds and supports</td>
<td>X</td>
</tr>
<tr>
<td>4 draft stops</td>
<td>X</td>
</tr>
<tr>
<td>5 insulation</td>
<td>X</td>
</tr>
<tr>
<td>6 insulation surface</td>
<td>X (5.3.2.4.12)</td>
</tr>
<tr>
<td>7 decoration</td>
<td>X</td>
</tr>
<tr>
<td>8 painted surface or fabric or veneer</td>
<td>X (5.3.2.4.12)</td>
</tr>
<tr>
<td>9 painted surface or fabric or veneer</td>
<td>X (5.3.2.4.12)</td>
</tr>
<tr>
<td>10 skirting board</td>
<td>X</td>
</tr>
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