QUALITY ASSURANCE
&
MATERIALS TESTING DIVISION
(QA&MTD)
QA&MTD

John Faini – Division Chief

TEAM LEADER

INTERDISCIPLINARY ENGINEERS

MINING EQUIPMENT COMPLIANCE SPECIALISTS

PHYSICAL SCIENTISTS

CHEMIST

TECHNICIAN
QA&MTD

MISSION

Maintain Integrity of MSHA Approval

QA - ensures mine equipment manufacturers continue to make the equipment as it was approved

Approval/Acceptance/Suitability of Mining Materials

MTD - evaluates mining materials to the applicable requirements of 30 CFR and voluntary standards
QA&MTD evaluates mining materials to the applicable requirements of 30 CFR and voluntary standards, typically for flame resistance.
An individual or organization that manufactures or controls the assembly of a product and that applies to MSHA for approval of that product.

*Controls the assembly* –
- design specifications must be specific to the applicant
- applicant must provide oversight of the manufacturing process
FLAME RESISTANT- MATERIAL APPROVAL PROGRAMS

PART 7 APPROVALS

Cables:  Power,  Signal,  Fiber Optic,  Co-Axial & Splice Kits

Brattice Cloth & Vent Tubing

Flame Tests are Conducted at Applicants’ or 3rd Party Lab

The A&CC Conducts Product Audit Flame Tests
Attachment No. 2

**ELECTRIC AND SIGNALING CABLE APPLICATION FORM**

<table>
<thead>
<tr>
<th>Title</th>
<th>Indicate N/A if not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Trade Name</td>
<td></td>
</tr>
<tr>
<td>2. Type - (nomenclature) (round/flat)</td>
<td></td>
</tr>
<tr>
<td>3. Voltage Rating &amp; Ampacity</td>
<td></td>
</tr>
<tr>
<td>4. Design Standard</td>
<td></td>
</tr>
<tr>
<td>5. Ground Check</td>
<td></td>
</tr>
<tr>
<td>6. Ground</td>
<td></td>
</tr>
<tr>
<td>7. Shield</td>
<td></td>
</tr>
<tr>
<td>8. Conductor</td>
<td></td>
</tr>
<tr>
<td>9. Jacket Material &amp; Spec. # (Color)</td>
<td></td>
</tr>
<tr>
<td>10. Conductor Insulation &amp; Spec. #</td>
<td></td>
</tr>
<tr>
<td>11. Filler Material</td>
<td></td>
</tr>
<tr>
<td>12. Any Additional Materials or Components</td>
<td></td>
</tr>
</tbody>
</table>

Submit:
- Application Form
- Certified Statements
- Testing Schedule
- Cross Sectional Drawing
We [insert name] certify that the cable meets the design portion of the technical requirements as specified in 30CFR, Subpart 7K, Section 7.404.

We [insert name] certify that we will perform the Quality Assurance requirements of 30CFR, Subpart A, Section 7.7.

____________________________________
Signature of Authorized Company Representative

Further;
After completion of the required cable testing, the applicant must certify that the cable meets the performance portion of the Technical Requirements as specified in 30CFR, Subpart 7K, Section 7.404. However, if an MSHA representative witnesses the testing, this statement is not necessary.

We [insert name] certify that the cable meets the performance requirements of Subpart K, [choose one]: Section 7.407 (power cable) or Section 7.408 (signal/fiber optic/co-axial) as specified in 30CFR, Subpart 7K, Section 7.404.

____________________________________
Signature of Authorized Company Representative
BRATTICE CLOTH APPLICATION FORM

1. Company Name ___________________________ Date ___________________________
   Telephone No. (Area Code) ___________________________
   Company Representative ___________________________

2. Identifying Code Number ___________________________

3. Product Description (include all variations)

<table>
<thead>
<tr>
<th>Trade Names</th>
<th>Style, Code No. or other designation</th>
<th>Color</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Type of Brattice (jute, cotton, plastic, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Thickness</td>
</tr>
<tr>
<td>2. Weight (oz./sq. yd.)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Film</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Film Supplier</td>
</tr>
<tr>
<td>2. Supplier's Stock #</td>
</tr>
<tr>
<td>3. Thickness (mil)</td>
</tr>
<tr>
<td>4. Weight (oz./sq. yd)</td>
</tr>
<tr>
<td>5. Percent of finished product by weight</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Scrim</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Scrim Supplier</td>
</tr>
<tr>
<td>2. Supplier's Stock #</td>
</tr>
<tr>
<td>3. Weight (oz./sq. yd)</td>
</tr>
<tr>
<td>4. Threads/inch</td>
</tr>
<tr>
<td>5. Denier</td>
</tr>
<tr>
<td>6. Percent of finished product by weight</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Adhesive</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Adhesive Supplier</td>
</tr>
<tr>
<td>2. Suppliers Stock #</td>
</tr>
<tr>
<td>3. Percent of finished product by weight</td>
</tr>
</tbody>
</table>
QA&MTD

FLAME RESISTANT - MATERIAL APPROVAL PROGRAMS

30CFR Part 18 Acceptances

Conveyor Belt
Conduit Hose
Fire Hose Liner
Non-Asbestos Packing Material

Fire Suppression Hose Jacket
Battery Box Insulation
Cable Reel Insulation
Life Lines
Attachment

Application Form
Conveyor Belt Product Description

Date __________________ Telephone __________________
Manufacturer __________________
Address __________________
Application Number __________________

Check one: This is ______ a new application.

_______ a request for an extension (Include a photocopy of any
prior acceptance letters from MSHA.)

Manufacturer's Product Trade Name and/or I.D. No. ____________________

Covers: Compound Designation No. __________________

Minimum Thickness: Top Cover ______ Bottom Cover ______

Carcass: No. of Piles (Min. & Max.) __________________

Skim Coat: Compound Designation No. __________________

Thickness ______

Friction Compound Designation No. __________________

Carcass Fabric:

Textile(s), Warp _____ Weft (fill) ______

Binder ______

Fabric Weight (oz./sq. yd. - Max.) __________________

Fabric Treatment __________________

Cable: Type of Metal __________________

Sizes Used __________________

Breaker (or Floated Ply): Top ______ Bottom ______

Textile(s), Warp _____ Weft (fill) ______

Fabric Weight (oz./sq. yd.) __________________

Fabric Treatment __________________
VOLUNTARY - FLAME RESISTANT ACCEPTANCES

Flame Resistant Solid Products Taken Into Mines

- Hydraulic/Air/Water Hose Jacket
- Belt Wipers/Skirt/Impact Bars
- Roof/Rib Grid Material
- Hydraulic Hose Protective Sleeve
Attachment 1

Flame Resistant Acceptance of Solid Products - Application Form

Date____________________

1. Company Name
   Address: __________________________
   Telephone No. (Area Code) __________ FAX No. __________
   Company Representative __________________________

2. Company Assigned Application No. (six digits or less) __________________________

3. Product Description (Include all variations) __________________________
   a. Trade Name: __________________________
   b. Style, Code No., (or other description): __________________________
   c. Potential use: __________________________

4. Formulation Ingredient   % by Weight   Tolerance (+ or - Percent)
   __________________________
   __________________________
   __________________________
   __________________________
   __________________________
   __________________________
   __________________________
   __________________________

5. Samples - were test samples sent, indicate: Yes _____ or No _____

6. Toxicity: For all products a statement must be provided that “the product in its final form and under normal use does not present a toxicity hazard to miners.”

7. A Materials Safety Data Sheet (MSDS) is required for the final end product, if one has been prepared in accordance with 29 CFR 1200, or for the hazardous components used to manufacture the final end product. Attach quality assurance information and sales literature.

8. Certification Statement

9. Each applicant for acceptance shall provide a certification statement which states:

   The product in its final form does not present a toxic hazard under “normal use” conditions.

   __________________________
   Signature of authorized company official.
a. Procurement procedures for the components or ingredients of the product,

b. Manufacturing practices to maintain the formulation,

c. Procedures for record keeping, such as test results, etc.

d. Critical Characteristics that will be flame tested or inspected to ensure that the finished product meets the flame resistance test requirements.
Acceptance Formats

Typically 30CFR Part 18 Acceptance will have this format:

18-CBXXYYYYY/0 - for conveyor belt (2G)
18-FHXXYYYYY/0 - for fire hose liner (2G)
18-FSXXYYYYY/0 - for fire suppression hose cover (2G)
18-HCXXYYYYY/0 – for hose conduit (2G)

Voluntary Acceptances will have this format:

IC-xxx/00

However, when there is a dual use product such as fire suppression hose cover & hydraulic hose cover, the acceptance number may look like this:

“2G-IC-xxxC/0”
Ventilation Products – 30CFR Part 75.333

Sealants – Strength Enhancing & Non-Strength Enhancing

Non-strength Enhancing
• ASTM E-162 – (Flame spread index of less than 25)

Strength Enhancing
• ASTM E-162 & ASTM E-72 (39 PSF min. average.)
8. A 5 pound sample of sealant sent (Yes/No) ____________
   (If foam, 4 samples as tested per ASTM E162)
   (If No, attach explanation.)

9. Sales literature attached (Yes/No) ________________
   (Sales literature may be sent later when available)

10. Application procedures attached (Yes/No) ___________
    (If No, attach explanation.)

11. A Material Safety Data Sheet (MSDS) for the final end
    product attached (Yes/No) ________________
    (If No, attach explanation.)

12. You may contact at ____________________________ at __________
    (Company Representative) (Telephone No.)
    for further information.

13. TOXICITY AND QUALITY ASSURANCE STATEMENT
    I certify that the sealant ____________________________, in its final form
    (Trade Name)
    presents no toxic hazard under normal use conditions. Furthermore, I certify,
    that we will assure product compliance for this product with respect to all
    specifications submitted to MSHA, A&CC.

    Signed ______________________________
    (Authorized Company Official)

    Title ______________________________
    Date ______________________________
VOLUNTARY EVALUATIONS
“SUITABILITY”

Ventilation Products – 30CFR Part 75.333

Non - Traditional Stoppings

30CFR Part 75.333 defines traditional as steel, concrete etc.

Non-combustibility Test
- ASTM E-119 – (no flames or holes larger than 2 sq. in.)

Strength Test
- ASTM E-72 – (39 PSF min. average.)
11. Installation instruction attached (Yes/No) ____________
   (If No, attach explanation.)

12. Quality assurance information attached (Yes/No) ______
    (If No, attach explanation)

13. Sales literature attached (Yes/No) _________________
    (Sales literature may be sent later when available)

14. TOXICITY AND QUALITY ASSURANCE STATEMENT

    I certify that the ventilation control ________________
    (Trade Name)

    in its final form presents no known toxic hazard under normal use conditions.
    Furthermore, I certify, that we will assure product compliance for this product
    with respect to all specifications submitted to MSHA, A&CC.

    Signed ______________________
    (Authorized Company Official)

    Title ________________________

    Date ________________________

Submit:
• Application Form
• Toxicity Statement
• QA Plan
• Testing Schedules
Chemical suppliers do not want to divulge their proprietary formulations to the applicant.

- Applicants are required to list the ingredients of their products by chemical terms in their application
- Provide MSDS Sheets
FIRE RESISTANT HYDRAULIC FLUIDS

30 CFR Part 35

Water Glycols

Invert Emulsions

Synthetics

High Waters - concentrates

Basic Tests

Auto Ignition Spray

Spray Flammability

Wick Evaporation
CONTACT INFORMATION

John Faini – 304-547-2038

Jim Erlinger – 304-547-2306

Dave Creamer – 304-547-2085

Bill Kelly – 304-547-2022

Bill Kelly – 304-547-2022