

International Fluid Power Society Connector & Conductor Subject Matter Outline

Job Responsibility: Product Identification

- Understand basic components of hose construction to be able to identify hose types.
- Use the layline information to identify the hose specifications.
- Identify terminal end(s) type and type of hose. Consult manufacturer's guidelines to determine pressure ratings of the fittings, hose and their suitability for specific application.
- Identify fittings and end connections using calipers, thread gauges, seat gauges and other suitable means to ensure proper compatibility with operating system.
- Identify port and fitting threads using measuring tools and charts to ensure the proper fittings are used to make the assembly.
- Identify flange type for the establishment of pressure rating suitability for application

Job Responsibility - Assembly Component Selection

- Use appropriate charts to determine ratings for stainless and carbon steel tubing for proper selection and application.
- Use the "STAMPED" acronym to determine the correct hose assembly parameters.
- Use the "STAMPED" method in selecting the proper tubing and fitting for a metal tube assembly.
- Examine for external physical abuse to determine and select the correct abrasion resistant material to prevent future hose damage.
- Use pressure conversion charts to convert metric (MPa) to English (psi) values to ensure use of correct assembly components.
- Determine correct hose replacement by measuring existing assembly. Select hose tube materials based on pressure ratings and fluid to ensure correct hose assembly.
- Select "0" rings using catalog information to prevent fitting leakage.
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Job Responsibility - Assembly Procedure and Operation

- Cut hose to measured length using proper equipment and procedures for assembly.
- Skive hose to proper length using proper equipment and procedures.
- Determine and mark insertion depth on hose to specifications.
- Perform crimp machine inspection and calibration to ensure proper final hose assembly.
- Use calipers to measure crimp dimensions.
- Assemble "field attachable" fittings to manufacturers' recommendations.
- Properly position and tighten hose clamps per manufacturers' specifications.
- Determine elbow displacement for double elbow assemblies.
- Clean hose assembly and determine cleanliness level.

- Flare tubing to make tubing assembly.
- Inspection of flareless fitting assembly.
- Inspection and assembly of two ferrule fittings.
- Use silver brazing to assemble fittings on to tube.
- Determine fitting requirements for A and AT hose based on whether hose skiving is required to maintain fitting compatibility.
- Use hydraulic test stand for proof, burst, and impulse testing as needed.

Job Responsibility - Documentation

- Identify and obtain appropriate specifications from manufacturer or standards organizations to comply with hose assembly requirements.
- Identify and use proper standards to ensure conformance and appropriate quality and safety.
- Use approval and listing agencies noted in documentation to validate procedures.
- Review specified documents for the pressure code of flanges to ensure proper pressure rating.
- Measure and compare flange type fittings to customer prints and/or standards to correctly determine proper end flange type.
- Inspect flares for proper quality.
- Perform visual inspection of final hose assembly.
- Document the quality of tested hose assemblies as to quality and procedures.
- Use hose assembly sampling for product validation and quality documentation.
- Package hose assembly per customer requirements.
- Dispose of used assemblies per procedures defined by management to prevent reuse.