MEDIA

The metal hose assembly designer must know what the hose will convey. Matching the application piping material is sometimes used as a guide in selecting the alloy for the metal hose. However, this practice does not necessarily mean that the alloy selected is suitable. Metal hose is manufactured from thin wall material and may not have the same total life as heavier wall tube or pipe of the same material. Some factors to be considered when designing metal hose assemblies include corrosion, abrasion and viscosity of the media conveyed.

Corrosion

Material selection of the core and braid should take into consideration the corrosive nature of the media conveyed by the hose assembly and the outside environment. Corrosion can be accelerated by many chemicals when high temperature is present.

OmegaFlex does not publish corrosion resistance data because of the many variables present in metal hose applications. Many reference materials are available and provide accurate corrosion data. The Corrosion Data Survey published by the National Association of Corrosion Engineers (NACE) is considered to be one of the sources for corrosion resistance information.

Abrasion

For internal abrasion, premature failure can occur if the media is abrasive. The use of an interlock liner may extend the life of a hose assembly. For external abrasion, a protective cover may be used to extend hose life.

Viscosity

Flow of viscous media can be enhanced by incorporating the use of a jacketed hose assembly. This design utilizes an inner hose that is encapsulated by an outer hose.

TEMPERATURE

Operating Temperature

Core materials have unique temperature capabilities. Consult Temperature Correction Factor table for temperatures.

Excursion Temperatures

Surge or upset temperatures should be considered when selecting the proper materials.

TESTING

Standard testing of the weld and structural components of the hose assembly includes hydrostatic testing and pneumatic testing (utilizing either air or helium). Other testing methods used include mass spectrometer, cold shock and dye penetration. Contact OmegaFlex on other test procedures.

CLEANING

Special cleaning such as commercial oxygen, moisture reduction and others are available from OmegaFlex. Contact OmegaFlex with your specifications.