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Starts.....

Copper-nickel Fittings

- Conventional wisdom in a contemporary format

A correctly designed and installed copper-nickel piping system can give years of good service, providing excellent resistance to sea water corrosion and biofouling as natural properties inherent to copper. When seeking information on copper-nickel fittings and connections, it used to be difficult obtaining an engineering overview of available types from one single source. This is no longer the case.

The Copper-nickel Task Group, formed by specialists in the alloys, has created a highly informative and practical website, www.coppernickel.org, which collates the myriad information into one place, providing an invaluable resource for engineers in this field.

Copper-nickel alloys have been widely used in seawater systems for many years, having an excellent resistance to seawater corrosion and biofouling. Their applications span offshore oil and gas platforms, power plants, desalination plants and commercial and naval shipping. In order to make these years of experience readily available to all, and also to provide data and guidelines for their continued use, the Task Group was formed and the website created. This continues to be developed to include new and up-to-date items important to engineers in understanding the behaviour of the copper-nickel alloys and assisting with design issues.

A new Fittings section has now been introduced within the System Design pages, which describes the multiplicity of fittings that have been developed for the alloys. It looks at bends, reducers and various types of T-pieces. Joining methods are also addressed, covering welding and brazing, flanged connections, threaded unions, press joints and pipe couplings. The advantages and disadvantages of each type of joining method are listed so that the user can make a practical comparison between them. Relevant standards are included as well as typical properties.

Insight is provided into the effect of various fitting geometries and production methods on seawater flow conditions. This is particularly relevant to copper alloy systems since avoiding turbulence is important. There is also a description of several types of metal sealing and soft sealing designs for threaded unions. Metallic seals are normally applied for higher temperature and aggressive media.

A CD of the contents of the website can be requested, free of charge, from the site itself, or from bryony.samuel@copperdev.co.uk.

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If you require any further information regarding copper-nickel fittings or copper alloys in marine applications, or would like a particular article tailored to your magazine, we can commission our marine consultant, Carol Powell, to produce something for you.



Photographs courtesy of EUCARO Buntmetall GmbH.

For further information, or high resolution versions of photographs, contact:

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