PR748 issued: 1st October 2008

75 years – CDA and Copper-Nickels

Copper-nickels enjoy special success in marine environments

At an event to celebrate the 75th anniversary of Copper Development Association (CDA) in London on the 1st October, an exhibition featured the latest resources to support designers, fabricators and operators of copper alloy systems for handling seawater.

Copper alloys are the traditional materials for handling seawater. Their range spans from copper itself, gun metals, aluminium brass, aluminium bronzes to copper-nickels. Copper-nickels in particular have a special parallel with CDA as their development and introduction occurred during the 1930s and today they continue to be used in arduous service in desalination, naval and commercial shipping and offshore oil and gas industries. This is in spite of the introduction over that time of titanium and high-alloyed stainless steels; they still possess properties that are eminently useful to modern service conditions.

There are two popular grades for handling seawater; these contain 10 and 30% nickel. The 10% alloy is the more popular and economic grade. Both alloys have a high resistance to chlorides in seawater and do not suffer from crevice corrosion, pitting and stress corrosion in the same way as stainless steels do or have a critical temperature where these forms of corrosion might occur. They also have a much higher resistance to stress corrosion by ammonia than other copper alloys. Providing well established guidelines for maximum flow rate are observed and exposure to polluted water is avoided, particularly during commissioning and standby, good service has been proven by their long track record. As for copper, these alloys also have an inherent resistance to macrofouling, which requires free exposure to seawater and insulation from less galvanically noble alloys to be at its most effective.

…/cont.

In recent years, a Copper-Nickel Task Force has been set up, organised and supported by CDA and other interested partners, to ensure the technical information collected about these alloys is not lost and is freely available to all. Lessons learned have been developed into guidelines for continuing service and these are all available in a comprehensive website: www.coppernickel.org which is regularly updated. The Task Force also encourages active discussion between producers, learned associations and end-users with an eye to the developing marine markets such as offshore wind, wave and tidal renewable sectors in providing sound technical guidance for effective service performance.

Ends.

For further information contact:

Bryony Samuel
Marketing Co-ordinator
Copper Development Association
5 Grovelands Business Centre, Boundary Way
Hemel Hempstead, Herts HP2 7TE
Tel: 01442 275705, Fax: 01442 275716
Email: bryony.samuel@copperdev.co.uk
Websites: www.copperinfo.co.uk and
www.coppernickel.org

Copper Connects Life.™

PR748 issued: 1st October 2008

75 years – CDA and Copper-Nickels

Copper-nickels enjoy special success in marine environments

At an event to celebrate the 75th anniversary of Copper Development Association (CDA) in London on the 1st October, an exhibition featured the latest resources to support designers, fabricators and operators of copper alloy systems for handling seawater.

Copper alloys are the traditional materials for handling seawater. Their range spans from copper itself, gun metals, aluminium brass, aluminium bronzes to copper-nickels. Copper-nickels in particular have a special parallel with CDA as their development and introduction occurred during the 1930s and today they continue to be used in arduous service in desalination, naval and commercial shipping and offshore oil and gas industries. This is in spite of the introduction over that time of titanium and high-alloyed stainless steels; they still possess properties that are eminently useful to modern service conditions.

There are two popular grades for handling seawater; these contain 10 and 30% nickel. The 10% alloy is the more popular and economic grade. Both alloys have a high resistance to chlorides in seawater and do not suffer from crevice corrosion, pitting and stress corrosion in the same way as stainless steels do or have a critical temperature where these forms of corrosion might occur. They also have a much higher resistance to stress corrosion by ammonia than other copper alloys. Providing well established guidelines for maximum flow rate are observed and exposure to polluted water is avoided, particularly during commissioning and standby, good service has been proven by their long track record. As for copper, these alloys also have an inherent resistance to macrofouling, which requires free exposure to seawater and insulation from less galvanically noble alloys to be at its most effective.

…/cont.

In recent years, a Copper-Nickel Task Force has been set up, organised and supported by CDA and other interested partners, to ensure the technical information collected about these alloys is not lost and is freely available to all. Lessons learned have been developed into guidelines for continuing service and these are all available in a comprehensive website: www.coppernickel.org which is regularly updated. The Task Force also encourages active discussion between producers, learned associations and end-users with an eye to the developing marine markets such as offshore wind, wave and tidal renewable sectors in providing sound technical guidance for effective service performance.

Ends.

For further information contact:

Bryony Samuel
Marketing Co-ordinator
Copper Development Association
5 Grovelands Business Centre, Boundary Way
Hemel Hempstead, Herts HP2 7TE
Tel: 01442 275705, Fax: 01442 275716
Email: bryony.samuel@copperdev.co.uk
Websites: www.copperinfo.co.uk and
www.coppernickel.org

Copper Connects Life.™