

Alloy Selection Training Module Launched

The Nickel Institute has launched the latest installment in a series of online training modules.

Designed to assist engineers, designers and materials specifiers select the proper stainless steel for their particular needs, the module builds on feedback from users of the “Good Practices” training module which was successful launch in 2004. The new module is called “An Introduction to the Selection of Stainless Steel for Corrosion Resistance.”

Consisting of 94 slides which are accompanied by audio narration and various interactive diagrams and illustrations, the module provides a total of about two hours of instruction if viewed in one sitting. Users may choose to view the module in smaller segments, returning to a particular point in the presentation at a later date. The design of the module navigation allows users to do this easily.

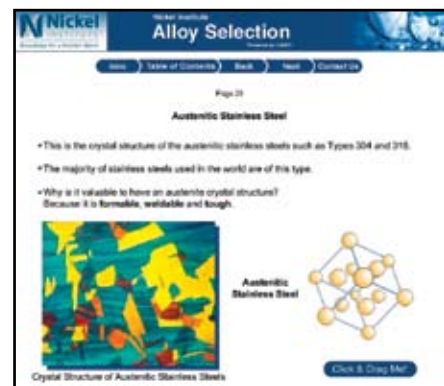
In general, the module presents basic background information on what stainless steel are and how they work, what alloy additions are made to stainless steel and why they are added. The effects of the various alloy additions (chromium, nickel, molybdenum, nitrogen and carbon) are discussed in terms of corrosion resistance and crystal structure. This leads to a discussion of the families of stainless steels (ferritic, austenitic, duplex and martensitic). This brings the user to the topic of how to select a stainless steel to meet particular technical needs.

Typical compositions of a few grades in each stainless steel family are presented and examples of their application in various industries are nicely illustrated.

The topic of corrosion follows, with a brief description of the various types (general, localized, pitting, crevice and chloride stress corrosion cracking). This

leads to a description of the high performance stainless steels and their applications.

At the end of the presentation, links are provided to give feedback and for sources of additional information, including Nickel Institute technical publications and other online training modules.



MORE INFORMATION:
www.nickelmagazine.org/alloyselection

NICKEL INSTITUTE

CORRECTIONS

In a report on water pipes in Japan in our June 2007 issue (page 4), we made an incorrect statement about water resources in that country. The report should have stated that in Japan leaks from taps and the limited amount of space for storing water pose a challenge.

The same issue contained incorrect information about the nickel content of S32003 stainless steel (page 16). The correct amount of nickel in this stainless steel is 3-4%. In addition, the UNS number in the photo caption was incorrect; it should have read S32003.

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UNS details Chemical compositions (in percent by weight) of the nickel-containing alloys and stainless steels mentioned in this issue of Nickel.

Alloy	Al	B	C	Cb	Co	Cr	Cu	Fe	Mn	Mo	N	Ni	P	Pb	S	Si	Sn	Ti	V	W	Y	Zn	Zr	Other
N06022 p. 5	-	-	0.015 max	-	2.5 max	20.0- 22.5	-	2.0- 6.0	0.50 max	12.5- 14.5	-	rem	0.02 max	-	0.02 max	0.08 max	-	-	0.35 max	2.5- 3.5	-	-	-	-
N10276 p. 5	-	-	0.02 max	-	2.5 max	14.5- 16.5	-	4.0- 7.0	1.00 max	15.0- 17.0	-	rem	0.030 max	-	0.030 max	0.08 max	-	-	0.35 max	3.0- 4.5	-	-	-	-
S30400 p. 4, 7 & 12	-	-	0.08 max	-	-	18.00- 20.00	-	-	2.00 max	-	-	8.00- 10.50	0.045 max	-	0.030 max	1.00 max	-	-	-	-	-	-	-	-
S30403 p. 4	-	-	0.03 max	-	-	18.00- 20.00	-	-	2.00 max	-	-	8.00- 12.00	0.045 max	-	0.030 max	1.00 max	-	-	-	-	-	-	-	-
S31600 p.7	-	-	0.08 max	-	-	16.00- 18.00	-	-	2.00 max	2.00- 3.00	-	10.00- 14.00	0.045 max	-	0.030 max	1.00 max	-	-	-	-	-	-	-	-
N06625 p.13	0.40- max	-	0.010 max	3.15- 4.15	-	20.0- 23.0	-	5.0- max	0.50 max	8.0- 10.5	-	rem	0.015 max	-	0.015 max	0.50 max	-	0.40 max	-	-	-	-	-	-
N07718 p.13	0.20- 0.80	0.006 max	0.08 max	4.75- 5.50	1.00 max	17.0- 21.0	0.30 max	rem	0.35 max	2.80- 3.30	-	50.0- 55.0	0.015 max	-	0.015 max	0.35 max	-	0.65- 1.15	-	-	-	-	-	-
N08825 p.13	0.2 max	-	0.05 max	-	-	19.5- 23.5	1.5- 3.0	rem	1.00 max	2.5- 3.5	-	38.0- 46.0	0.03 max	-	0.03 max	0.5 max	-	0.6- 1.2	-	-	-	-	-	-
N09925 p.13	0.10- 1.50	-	0.03 max	0.50 max	-	19.5- 23.5	1.50- 3.00	22.0 min	1.00 max	2.50- 3.50	-	38.0- 46.0	-	-	0.03 max	0.50 max	-	1.90- 2.40	-	-	-	-	-	-
S31803 p.13	-	-	0.030 max	-	-	21.0- 23.0	-	-	2.00 max	2.50- 3.50	0.08- 0.20	4.50- 6.50	0.030 max	-	0.020 max	1.00 max	-	-	-	-	-	-	-	-