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## **Duplex Steel Preferred Over 316L Steel in Process Equipment, Metallurgist Reports**

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**Twinsburg, OH – January 8, 2006** – A new report by a noted metallurgist finds that process engineers should specify duplex 2205 stainless steel for process equipment instead of 316L stainless steel.

The report, published by Dr. Hira Ahluwalia, a metallurgist with Material Selection Resources, Inc. ([www.doctormetals.com](http://www.doctormetals.com)), documented the improved corrosion resistance, the superior localized pitting and crevice corrosion resistance, and resistance to chloride-stress cracking properties of duplex 2205. The report is an independent study commissioned by L. J. Star, a leading supplier of sight glass windows. L. J. Star initiated the report in response to customer questions about which material is best suited for the harsh environments common to process installations.

Ahluwalia concluded that “sight windows made with duplex 2205 steel are superior in corrosion resistance and other fabrication properties to sight windows made with 316L steel.”

The report states that “duplex steels have high chromium content, which is beneficial in oxidizing acids, along with sufficient molybdenum and nickel to provide resistance in mildly reducing acid environments.”

In addition, duplex steels contain alloys that provide more resistance to chloride-stress cracking. The report points out that, according to ASTM G 48 test results (10 percent ferric chloride), the critical pitting and crevice corrosion temperatures for 2205 steel are well above those of 316L steel.

The full technical report is available at [www.ljstar.com/pubs/6.htm](http://www.ljstar.com/pubs/6.htm). L.J. Star has also prepared a detailed list of technical specs and information to help engineers make the right selection in sight glass materials and designs, located on its website under the “Myths and Facts” tab.

Nicknamed “Dr. Metals,” Ahluwalia is a materials engineering and corrosion consultant serving the chemical, pharmaceutical, manufacturing and metal industries. He is a frequent conference speaker on materials technology and new methodologies to use materials successfully.

### **About L.J. Star**

L.J. Star Incorporated provides an extensive line of process observation equipment -- sight glasses, lights, sanitary fittings, and level gage instrumentation. Product lines include Metaglas<sup>®</sup> Safety Sight Windows, Lumiglas<sup>®</sup> Explosion Proof Lights and Cameras, Visual Flow Indicators, Sight Ports, Sanitary Clamps, Magnetic Level Gages and Gage Glass. For additional information, contact L.J. Star Incorporated, P.O. Box 1116, Twinsburg, OH 44087. Phone: 330-405-3040. Fax: 330-405-3070. Email: [view@ljstar.com](mailto:view@ljstar.com). Website: [www.ljstar.com](http://www.ljstar.com).