Stainless Steel for Diesel Exhaust Fluid Tanks
STI/SPFA
February 2010

• Stainless is a Global Business

Stainless steel – consumption

Stainless steel – end uses

Stainless steel is the fastest growing metal
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• What is a DEF Tank?
• Why are they an issue?
• What is DEF?
  • Diesel Exhaust Fluid is one key element in the SCR process
• What is SCR?
  • Selective Catalytic Reduction – NOx reduction systems
• What is UREA?
  • A compound of nitrogen that turns to ammonia when heated
• The solution comes with a problem
  • Contamination of the UREA inhibits the reaction – Urea is corrosive to materials such as aluminum, copper, lead and zinc.
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• Stainless steel for DEF Tanks
  • No leaching or contamination
  • Corrosion resistant
  • Resistance to extreme heat and cold
  • A full range of product forms
    • Plate, sheet, bar, tubulars, fittings
  • Nine grades acceptable for DEF construction
    • 304, 321, 316L, 316Ti, 316LMo, 317L, 904L, LDX 2101®, and 2205 Code Plus Two®
  • Four grades listed under API 650 standards for tank design
    • LDX 2101®, Outokumpu 2304, 2205 Code Plus Two®, Outokumpu 2507
  • New lean Duplex, LDX 2101®, which offers higher mechanical strength that can reduce material costs
  • Proven history with a European automaker
Outokumpu- an international stainless steel company

- Outokumpu is a global leader in stainless steel
- Our vision is to be the undisputed number one in stainless, with success based on operational excellence
- The Group’s sales over EUR 5.5 billion in 2008
- Outokumpu’s melting capacity totals 2.55 million tons and the finished product’s capacity 1.9 million tons
- Outokumpu has been listed on the NASDAQ OMX Helsinki since 1988

Outokumpu Group employs appr. 7 500 people in 30 countries with steel plants in Finland, Sweden, England and the USA. We have a key position in the North American stainless market and are a leader in Duplex and Special Stainless Alloys.
Outokumpu – stainless in all forms

All products
• Coil and sheet
• plate
• Thin strip
• Tubular products
• Long products

All grades
• Austenites (Nickel containing), incl. High alloyed specials
• Duplex (Low nickel – high strength)
• Ferritics (No nickel)
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Summary

• For DEF tanks think Stainless
• For Stainless tanks think lean Duplex LDX 2101®
• Think Outokumpu