



June 10, 2016 at 9.00 am EET

OUTOKUMPU REBAR CHOSEN FOR CRYOGENIC LNG PROJECT IN THE NETHERLANDS

Stainless steel rebar produced by Outokumpu is being used to reinforce a spill basin at the new liquefied natural gas (LNG) Gate Terminal on Rotterdam's North Sea coast. Both the basin's concrete and reinforcement must withstand the extreme conditions of a cryogenic environment and temperatures as low as -165° Celsius.

Says Richard Wigmans, Outokumpu stainless steel rebar agent for Benelux & Germany: "If you're working with cryogenic concrete, the rebar must be stainless steel. It is the only thing you can use. Nothing else will work."

For the Gate Terminal project, Outokumpu provided 10 tonnes of rebar formed from Core 304LN/4311. Testing was conducted at Tudor Advanced Materials & Structures in Luxemburg. The alloy is proven to retain its mechanical properties at temperatures as low as -196° Celsius. As with all austenitic stainless steel, Core 304LN/4311 maintains its ductility at very cold temperatures, meaning that it will not fracture.

Using stainless steel prolongs the structure's lifetime, reduces long-term costs and minimizes need for maintenance. Stainless steel also has significant corrosion resistance, of particular importance in maritime environments where chloride-induced corrosion is a threat.

Says Paula Kraaijeveld of rebar processor/fabricator BetonijzerBuigCentrale Handelmaatschappij (BBC): "If standard carbon steel rebar is used as reinforcement, the concrete will crack." BBC provided construction coordination, installation supervision and customized shipping services. BBC also handled CARES certifications, validating product conformity and consistent quality.

Outokumpu customized the material for the Gate Terminal in four diameters (Outokumpu's range is 6 to 40 millimeters) and in several lengths and shapes. The material is produced in coil form, straightened into standard lengths or cut and bent to custom needs.

Outokumpu has a century of experience creating efficient, long-lasting, recyclable stainless steels. Its global offering includes quality-critical Long Products for infrastructures. Outokumpu's Long Products sites are located in the UK, Sweden and the US, all renowned for their high quality products, flexibility and world-class delivery performance.

Read more about Outokumpu Long Products rebar offering at www.outokumpu.com/rebar.

For more information:

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Outokumpu Group

Outokumpu is a global leader in stainless steel. We create advanced materials that are efficient, long lasting and recyclable – thus building a world that lasts forever. Stainless steel, invented a century ago, is an ideal material to create lasting solutions in demanding applications from cutlery to bridges, energy and medical equipment: it is 100% recyclable, corrosion-resistant, maintenance-free, durable and hygienic. Outokumpu employs 11,000 professionals in more than 30 countries, with headquarters in Espoo, Finland and shares listed in Nasdaq Helsinki.

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