

WHAT IS DNV-APPROVED CHAIN PRODUCTS?

Compiled June 2023

DNV (Det Norske Veritas®) is one of the world's leading certification bodies that deliver world-renowned testing, certification, and technical advisory services.

DNV-approved components and fully welded chain slings for offshore container lifting are specifically designed and manufactured to meet the stringent requirements required by sub-zero service temperatures and a corrosive environment. These products operate mostly in the splash zone of the harsh North Sea environment where temperatures as low as -20°C can be experienced.

McKinnon Chain manufactures DNV Master links and sub-assemblies ranging from 16mm to 75mm in diameter. Its working load limits range from 4.1- 100 tons, in accordance with the requirements of the DNV 2.7-1 and DNV 2.7-3 standards. In addition, we also manufacture various configurations of fully welded chain slings as per customer requirements. These configurations range from two-legged pairs to four –and five-legged slings. We have DNV-type approval for both DNV components as well as DNV fully welded chain slings.

McKinnon Chain DNV type-approved products are designed to meet the design strength requirements as well complying with the toughness requirements of 42 Joule minimum at -20°C as specified in DNV 2.7-1.

McKinnon Chain DNV type-approved products meet toughness requirements at low temperatures through the selection of the most suitable steel chemistry as well as following the correct manufacturing-, testing-, and heat treatment procedures.



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In an offshore operating environment, the combined effect of brittle or high-hardness steel and a corrosive environment can lead to Hydrogen Embrittlement (HE) or Stress Corrosion Cracking (SCC) which can result in unexpected catastrophic failures. The McKinnon Chain DNV type-approved products manufacturing process ensures that a balance between hardness and toughness is maintained on these products in order to mitigate this risk.

For extended service life in corrosive environments, McKinnon Chain also offers DNV type-approved products in the “Zinc Tough™” condition to ensure maximum corrosion resistance. This surface treatment is environmentally friendly with no interference with the mechanical properties and poses a zero risk of hydrogen embrittlement.

We are proud to supply this product range through William Hackett lifting products in the UK and Europe.

