



DET NORSKE VERITAS

APPROVAL OF MANUFACTURER

CERTIFICATE

CERTIFICATE NO. AMM-2479

This is to certify that

Ramnäs Bruk AB
Ramnäs, Sweden

is an approved manufacturer of
Chain Cables

in accordance with

DNV Certification Notes No. 2.6 - Certification of Offshore Mooring Chain

and the following particulars:

Product	Offshore mooring chain
Grades	NV R3, NV R3S, NV R4
Delivery condition	See page 2
Max. diameter	See page 2

Place and date

Høvik, 2005-12-02

for DET NORSKE VERITAS AS

John Olav Nøkleby
Head of Section



Local Office
DNV Stockholm

This Certificate is valid until

2009-12-31

Rune Andreassen
Surveyor

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



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Particulars of the approval:

Chain type	Grade	Delivery condition ¹⁾	Diameter (mm)	Bar manufacturer ²⁾
Stud link and studless	NV R3	QT	102	Ovako Steel AB, Hofors and Hållefors Plant ³⁾
		DN	125	Ovako Steel AB, Hofors and Hållefors Plant ³⁾
Stud link and studless	NV R3S	QT	125	Ovako Steel AB, Hofors and Hållefors Plant ³⁾
			132	Corus Engineering Steels, Stocksbridge Works
Stud link	NV R3, NV R3S	QT	92	Corus Engineering Steels, Rotherham Works
Stud link	NV R4	DQT	82	Ovako Steel AB, Hofors and Hållefors Plant ³⁾
Stud link and studless	NV R4	QT	92	Corus Engineering Steels, Rotherham Works
Stud link and studless	NV R4	QT or DQT	122	Corus Engineering Steels, Stocksbridge Works
Stud link and studless	NV R4	QT	125	Ovako Steel AB, Hofors and Hållefors Plant ³⁾
Stud link and studless	NV R4	QIA	157	Corus Engineering Steels, Stocksbridge Works
				Ovako Steel AB, Hofors and Hållefors Plant ³⁾

Remarks:

¹⁾ DN: Double Normalised; QT: Quenched and Tempered; DQT: Double Quenched and Tempered; QIA: Quenched and Intercritical Annealed.

²⁾ For offshore mooring chain, the approval is limited to the listed bar manufacturers.

³⁾ Hållefors Plant approved for maximum 84 mm.