

APPROVAL CERTIFICATE

This is to certify, that the undernoted products have been approved in accordance with the relevant requirements of the DNV GL Approval System.

Certificate No.	19 375 - 11 HH		
Company	Hilti Aktiengesellschaft PO Box 333 9494 Schaan, LIECHTENSTEIN		
Product	CHANNEL SYSTEM MQ		
Type	MQ-21, MQ-31, MQ-41, MQ-21D		
Technical Data / Application	TECHNICAL DATA	Material	Normal galvanized Hot-dip galvanized (HDG/HDGplus) Stainless steel (A2/ A4)
	Temperature range:	-40°C up to +110°C	
	RANGE OF APPLICATION		
	<ul style="list-style-type: none"> • The CHANNEL SYSTEM MQ in connection with the pipe rings, fasteners and with threaded rods (length 30mm up to 110 mm) is approved for use in piping systems on ships and other structures classed by Germanischer Lloyd. In case of threaded rods exceeding 150 mm in length a diagonal bracing is recommended. • The permissible operating temperatures are to be in accordance with the instructions of the manufacturer. • The assembly instruction of the manufacturer is to be observed. 		
Approval Standard	VI-7-8: Test Requirements for Components and Systems of Mechanical Engineering and Offshore Technology, Edition 2008.		
Documents	<ul style="list-style-type: none"> • Test reports: NE 10-228, dated: 17.12.2010, Technical data / specifications, Catalog • Document "Stückliste Hilti für den allgemeinen Schiffbau" version 3/ 2012.01.27 • Table " GL Lasten Schiene fv-A2-4" dated 01/2012 • GL Approval Ref.-No.: 09-117565, 10-009275, 11-133623 		
Remarks	<ul style="list-style-type: none"> • MATERIAL SPECIFICATION, LOAD CHANNEL SYSTEM MQ, MARKING and REMARKS / LIMITATIONS see page 2. 		

Valid until **2016-06-07**
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File No. **XI.B.03**
Hamburg, 2015-03-18


Olaf Drews


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MATERIAL SPECIFICATION

Normal galvanized

Channel S 250 GD / SGH 340
Connectors S 235 JR / QSTE 380 TM / GTW 45
Pipe clamps S 235 JR / DD11

Material Hot-dip galvanized (HDG/HDGplus)

Channel S 235 JR / S 250 GD
Connectors S 235 JR / EN-GJMW-450-07 / C4C / DD11
Pipe clamps S 235 JR / DD11

Material Stainless steel (A2/A4)

Channel 1.4301 / 1.4404 / 1.4571
Connectors 1.4401 / 1.4404 / 1.4571 / 1.4581
Pipe clamps 1.4571

LOAD CHANNEL SYSTEM MQ

Channel galvanized material Fyk = 235 [N/mm²], yield strength
Channel A2 material Fyk = 220 [N/mm²], yield strength
Channel A4 material Fyk = 240 [N/mm²], yield strength

Load for 1-panel beam at 1-axial bending related to line load, 1 point load, 2 point load and 3 point load according to table "GL Lasten Schiene" dated 2011.11.04.

MARKING

Each device shall bear legible and durable marking on the body or on a plate fixed securely to the body as follows:

- Manufacturer`s Mark •

REMARKS / LIMITATIONS

The use of the CHANNEL SYSTEM MQ outside the range of application is subject to special consideration by Germanischer Lloyd in each individual case. The installation, operating and maintenance instructions of the manufacturer are to be strictly adhered to.

The selection of the CHANNEL SYSTEM MQ for the corresponding application and the right installation are to be in accordance with the requirements of the manufacturer.

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DNV GL

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