

S.Z Schweißfachbetrieb  
Dorfstr. 2a  
25524 Itzehoe  
Germany

DNV GL SE  
Region West Europe  
CMC Team North East  
Brooktorkai 18  
20457 Hamburg  
Germany  
Tel: +49 40 36 149 9382

**Date:** 2021-02-01      **Our reference:** A0902497      **Your reference:**

**Approval letter for welding procedure approval:**

The following document is stamped and given the status as shown below

Drawing No.	Rev.	Type	Title	Status
141 34 BW PH 0,7-1,3	-	WPQR	141 34 BW PH 0,7-1,3 - DNV Ref A0902497_sg.pdf	Approved

Dear Mr. Düsing,  
your WPQR 141 34 BW PH 0,7-1,3 has been approved in accordance with DNV GL Ru Ship Part 2 Chapter 4 Section 5.13 and DIN EN ISO 15614-6 with following range of approval:

Parameter	Welded	Range of approval
Base Material	CuNi10Fe1MN	W34
Thickness [mm]	1	0,5-2
Product Form	Tube	Plate, Tube
Process	141	141
Gas	I1	I1
Position	PH	all
Seam Type	Butt weld (BW), ss gb	BW ss gb, FW
Built Up	Multilayer	Multilayer
Filler Metal	UTP 387	Filler metal-gas-combinations approved by DNV GL for CuNi30Fe
Current	DC -	DC -
Heat Input [kJ/cm]	7,5 - 13,9	7,5 - 13,9 ±25%
Pre Heating [°C]	10	≥ 10
Max. Interpass Temperature [°C]	120	≤ 120
Post Weld Heat Treatment	--	--

Sincerely  
for DNV GL SE

  
Dennis Kühne  
Manager Product Certification Team  
North/East Germany

Mobile: +491732176362  
Direct: +493915982224  
dennis.kuehne@dnvgl.com



Pelz, Markus  
Hamburg  
Approved acc.to DNV GL Ru  
Ship and DIN EN ISO 15614-6  
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Markus Pelz  
Senior Surveyor, SFI/IWE

Mobile: +491749045839  
Direct: +4940361492950  
markus.pelz@dnvgl.com

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141/34/BW/PH/1-3	-	WPQR	141 34 BW PH 1-3 - DNV Ref A0902497_sg.pdf	Approved

Dear Mr. Düsing,  
your WPQR 141 34 BW PH 1-3 has been approved in accordance with DNV GL Ru Ship Part 2 Chapter 4 Section 5.13 and DIN EN ISO 15614-6 with following range of approval:

Parameter	Welded	Range of approval
Base Material	CuNi10Fe1,6MN	W34
Thickness [mm]	1,5	0,7-3
Product Form	Tube	Plate, Tube
Process	141	141
Gas	I1	I1
Position	PH	all
Seam Type	Butt weld (BW), ss gb	BW ss gb, FW
Built Up	Multilayer	Multilayer
Filler Metal	UTP 387	Filler metal-gas-combinations approved by DNV GL for CuNi30Fe
Current	DC -	DC -
Heat Input [kJ/cm]	4,7 - 7,3	4,7 - 7,3 ±25%
Pre Heating [°C]	10	≥ 10
Max. Interpass Temperature [°C]	120	≤ 120
Post Weld Heat Treatment	--	--

Sincerely  
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Dennis Kühne  
Manager Product Certification Team  
North/East Germany

Mobile: +491732176362  
Direct: +493915982224  
dennis.kuehne@dnvgl.com



Pelz, Markus  
Hamburg  
Approved acc.to DNV GL Ru  
Ship and DIN EN ISO 15614-6  
2021.04.01 21:57:44+02'00'

Markus Pelz  
Senior Surveyor, SFI/IWE

Mobile: +491749045839  
Direct: +4940361492950  
markus.pelz@dnvgl.com

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Germany

DNV GL SE  
Region West Europe  
CMC Team North East  
Brooktorkai 18  
20457 Hamburg  
Germany  
Tel: +49 40 36 149 9382

**Date:** 2021-02-02      **Our reference:** A0902497      **Your reference:**

**Approval letter for welding procedure approval:**

The following document is stamped and given the status as shown below

Drawing No.	Rev.	Type	Title	Status
141/34/BW/PH/3-8	-	WPQR	141 34 BW PH 3-8 - DNV Ref A0902497_sg.pdf	Approved

Dear Mr. Düsing,  
your WPQR 141 34 BW PH 3-8 has been approved in accordance with DNV GL Ru Ship Part 2 Chapter 4 Section 5.13 and DIN EN ISO 15614-6 with following range of approval:

Parameter	Welded	Range of approval
Base Material	CuNi10Fe1,6MN	W34
Thickness [mm]	4	2-8
Product Form	Tube	Plate, Tube
Process	141	141
Gas	I1	I1
Position	PH	all
Seam Type	Butt weld (BW), ss gb	BW ss gb, FW
Built Up	Multilayer	Multilayer
Filler Metal	UTP 387	Filler metal-gas-combinations approved by DNV GL for CuNi30Fe
Current	DC -	DC -
Heat Input [kJ/cm]	8,2 - 12,6	8,2 - 12,6 ±25%
Pre Heating [°C]	10	≥ 10
Max. Interpass Temperature [°C]	120	≤ 120
Post Weld Heat Treatment	--	--

Sincerely  
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Dennis Kühne  
Manager Product Certification Team  
North/East Germany

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Direct: +493915982224  
dennis.kuehne@dnvgl.com



Pelz, Markus  
Hamburg  
Approved acc.to DNV GL  
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15614-6  
2021.04.01 21:51:23+02'00'

Markus Pelz  
Senior Surveyor, SFI/IWE

Mobile: +491749045839  
Direct: +4940361492950  
markus.pelz@dnvgl.com