

Thybotech aps
Fjernvarme pumpe
PO:
Project:
26. oktober 2016

Sdr. Herred Kraftvarme
102222

Kvalitetssikringsdokumentation



F 9.1.11

Work order and QC report

Page 1

Work order number:

102222

Workorder Information	
Startup date:	07.10.2016 Del. date:
Production place:	Svendborg Salesp. Leif Riis
Customer:	Thybotech aps Contactp.
Customer email:	Phonen.
Item name:	Fjernvarme pumpe Item-n.
Coatning af pumpe med Ht-s i 3 lag og udvendig coatning i ral 1032	
Customer PO:	Sdr. Herred Kraftvarme Supervisor: MTS

10 Recieve control and job planning

Description	Requirement	Result	Date/sign
Recieve control	PI-1 recieve control	OK	7.10.16 MTS
Briefing performed	F 4.1.6 or consult salesperson	OK	7.10.16 MTS
Foto documentation	take picture	OK	7.10.16 MTS

20 Disassemble and worn out areas ident.

Description	Requirement	Result	Date/sign
Carefull disassemble	acc. to customer spec		
Worn out areas identified	PI-2 mark up areas		
Grinding if sharp edges	min. R2		
Emulsion wash	steam wash + emulsion	OK	7.10.16 DH
Foto documentaton	take picture		

40 Abrasive blasting and surface analysis

Description	Requirement	Result					Date/sign
		Step 1	Step 2	Step 3	Step 4	Step 5	
Remove ident. number signs before bl.		OK					13.10.16 TK
Masking before blasting sensitive area		OK					13.10.16 TK
Oil and grease	GT-6: none	OK					13.10.16 TK
Chlorides	GT-1: <50 mg/m2	OK					13.10.16 TK
Ph	GT-2: 6-9	OK					13.10.16 TK
Fe2+	GT-3: <10 µg/cm2	OK					13.10.16 TK
Cleanliness	GT-4: SA 2,5 to SA 3	OK					13.10.16 TK
Profile	GT-4: 75 - 125 mi.	OK					13.10.16 TK
Rework method	Blast/Dem./HP/Oven	N/A					13.10.16 TK
Surface defects	no surface defects	N/A					13.10.16 TK
Blast materials	Stainless/brass - non metallic: Garnet 20-40						13.10.16 TK
Add. materials	50 Kg						13.10.16 TK
Foto documentaton	Take picture				OK		13.10.16 TK

50 Coating application

Coating area:		Internal		Internal		Internal			
Coating material:		ARC HT-S blå		ARC HT-S grå		ARC HT-S blå			
Required thickness:									
Description		Result	Date/Sign	Result	Date/Sign	Result	Date/Sign	Result	Date/Sign
Masking before coating		OK	13.10.16 TK	N/A	13.10.16 TK	N/A	13.10.16 TK		
Brass - coat within 1 hour		N/A	13.10.16 TK	N/A	13.10.16 TK	N/A	13.10.16 TK		
Airtemperatur	> 10 °C	20,4	13.10.16 TK	20,2	13.10.16 TK	21,3	13.10.16 TK		
RH	< 85%	46	13.10.16 TK	47,4	13.10.16 TK	46,7	13.10.16 TK		
Dewpoint		8,4	13.10.16 TK	8,7	13.10.16 TK	9,5	13.10.16 TK		
Surface temp.	> 10°C	20	13.10.16 TK	20,4	13.10.16 TK	21,1	13.10.16 TK		
Dewpoint Δ	> 3°C	11,6	13.10.16 TK	11,7	13.10.16 TK	11,6	13.10.16 TK		
Cleaning dust	No dust	OK	13.10.16 TK	N/A	13.10.16 TK	N/A	13.10.16 TK		
Coating/wet film	GT-7	OK	13.10.16 TK	N/A	13.10.16 TK	N/A	13.10.16 TK		
Overcoat time	See data sheet	OK	13.10.16 TK	OK	13.10.16 TK	N/A	13.10.16 TK		
Foto document.	Take pic.	OK	13.10.16 TK	OK	13.10.16 TK	OK	13.10.16 TK		
Material lot number		A: 160222		A: 160222		A: 160222			
		B: 150505		B: 160309		B: 150505			
Material stock number		A: O82734		A: O82734		A: O82734			
		B: O82735		B: O82742		B: O82735			
Material consumption		250 Gram		250 Gram		250 Gram			
Additional consumption:									

70 Coating control

Coating material	ARC HT-S blå			ARC HT-S grå		ARC HT-S blå				
Description	Requirem.	Result	Date/Sign	Result	Date/Sign	Result	Date/Sign	Result	Date/Sign	
Dry film thickness	GT-8	N/A	13.10.16TK	N/A	13.10.16TK	750+	14.10.16DH			
Pinhole control	GT-5	N/A	13.10.16TK	N/A	13.10.16TK	OK	14.10.16DH			
Visuel control	GT-9	OK	13.10.16TK	OK	13.10.16TK	OK	14.10.16DH			
Remove coating spills										
Sea water test	MOTS85									
Foto documentation	take picture									

80 Postcuring

Description	Requirement	Result	Date/sign
Postcure	95 °C for 12 h or 95 °C IR 2 h	95c 12 h 0k	14.10.16 DH
Foto documentation	Take picture	OK	14.10.16 DH

100 Final control

Description	Result	Date/sign
Balancing of rotating impellers		
Item safely packed PI-3	OK	19.10.2016 MTS
Foto documentation Take picture	OK	19.10.16 DH
Supervisor approval of all processes / green label	OK	19.10.16 MTS

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Workorder Information	
Startup date:	07.10.2016
Del. date:	
Production place:	Svendborg
Salesp.	Leif Riis
Customer:	Tybotech APS
Contactp.	
Customer email:	-
Phonen.	
Item name:	Item-n.
Coatning af pumpe med Ht-s indvendig i 3 lag og udvendig coatning i ral 1032	
Customer PO:	Sdr. Herred Kraftvarme
Supervisor:	Magnus thor stefansson

40 Abrasive blasting and surface analysis							
Description	Requirement	Result					Date/sign
		Step 1	Step 2	Step 3	Step 4	Step 5	
Remove ident. number signs before bl.		OK					17.10.16 NJ
Masking before blasting sensitive area		OK					17.10.16 NJ
Oil and grease	GT-6: none	N/A					17.10.16 NJ
Chlorides	GT-1: <50 mg/m2	N/A					17.10.16 NJ
Ph	GT-2: 6-9	N/A					17.10.16 NJ
Fe2+	GT-3: <10 µg/cm2	N/A					17.10.16 NJ
Cleanliness	GT-4: SA 2,5 to SA 3	2.5					17.10.16 NJ
Profile	GT-4: 75 - 125 microns	80					17.10.16 NJ
Rework method	Blast/Dem./HP/Oven	OK					17.10.16 NJ
Surface defects	no surface defects	OK					17.10.16 NJ
Blast materials	Stell grit						
Add. materials							
Foto documentaton	Take picture						

50 Coating application

Coating area:		Pump house		Pump house			
Coating material:		Hempadur		Hempathane ral1032			
Required thickness:							
Description	Result	Date/Sign	Result	Date/Sign	Result	Date/Sign	Result Date/Sign
Masking before coating	OK	17.10.16NJ	OK	17.10.16NJ			
Brass - coat within 1 hour	N/A	17.10.16NJ	N/A	17.10.16NJ			
Airtemperatur > 10 °C	21.2	17.10.16NJ	21.2	17.10.16NJ			
RH < 85%	46.4	17.10.16NJ	46.4	17.10.16NJ			
Dewpoint	9.3	17.10.16NJ	9.3	17.10.16NJ			
Surface temp. > 10°C	20.5	17.10.16NJ	20.5	17.10.16NJ			
Dewpoint Δ > 3°C	11.2	17.10.16NJ	11.2	17.10.16NJ			
Cleaning dust No dust	OK	17.10.16NJ	OK	17.10.16NJ			
Coating/wet film GT-7	OK	17.10.16NJ	OK	17.10.16NJ			
Overcoat time See data sheet	OK	17.10.16NJ	OK	17.10.16NJ			
Foto document. Take pic.	OK	17.10.16NJ	OK	17.10.16NJ			
Material lot number	46070230		016100198-T				
	45111299		46090528				
Material stock number							
Material consumption	1 L		1 L				
Additional consumption:							

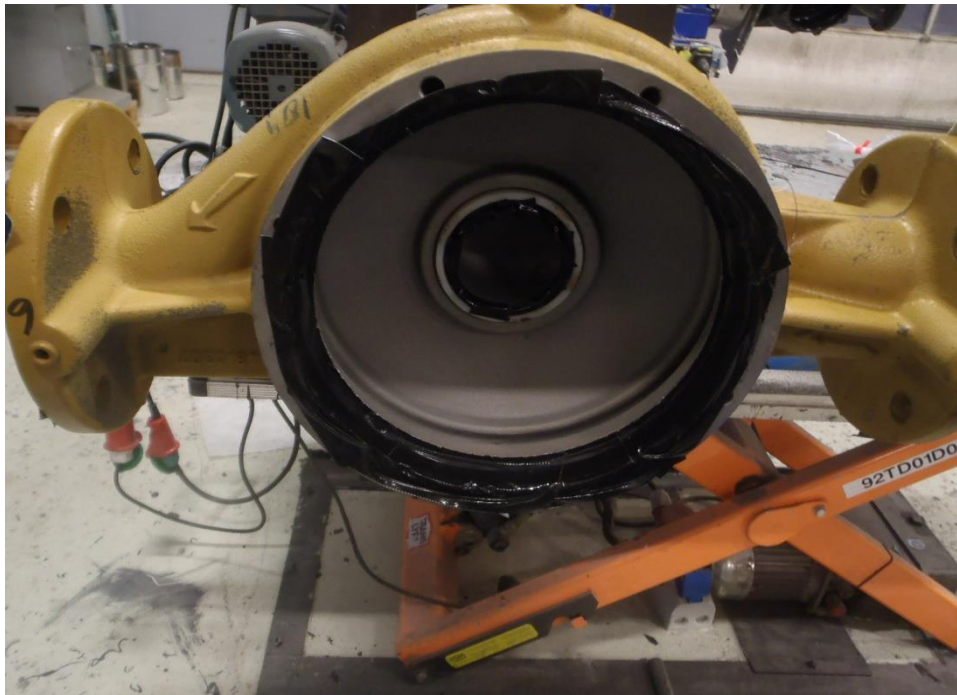
70 Coating control

Coating material		Hempadur		Hempathane ral1032					
Description	Requirem.	Result	Date/Sign	Result	Date/Sign	Result	Date/Sign	Result	Date/Sign
Dry film thickness	GT-8	N/A	17.10.16NJ	200+	20.10.16DH				
Pinhole control	GT-5	N/A	17.10.16NJ	N/A	20.10.16DH				
Visuel control	GT-9	OK	17.10.16NJ	OK	20.10.16DH				
Remove coating spills									
Sea water test	MOTS85								
Foto documentation		take picture							

100 Final control

Description	Result	Date/sign
Balancing of rotating impellers	NA	20.10.2016 MTS
Item safely packed PI-3	OK	20.10.2016 MTS
Foto documentation Take picture	OK	20.10.16 DH
Supervisor approval of all processes / green label	OK	20.10.16 MTS

Blæst pumpe



Første coat



2 coat



3 coat



udv coate ral 1032

