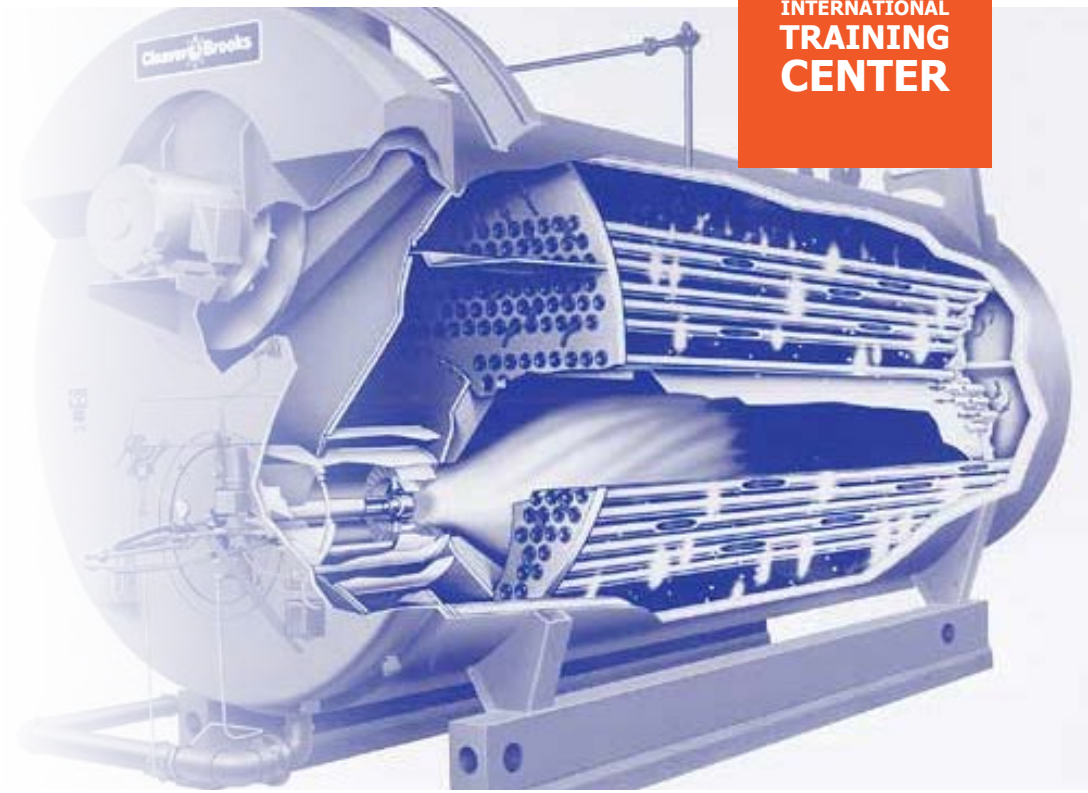
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CUSTOMER:

NEW ENERGY SERVICES B.V.

is responsible for the technical maintenance of boiler plants. Being the largest Dutch specialist in the maintenance of boiling (heating water converter) units, the company works with all types of boilers. In the Netherlands, the company has the highest experience in technical maintenance and repair in this field.



Testing of welders for the maintenance of:

- heating water converters;
- boilers;
- heat-exchangers;
- pressure vessels.

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Welding of various types of steel with a non-consumable electrode in inert gas atmosphere (the 141-TIG process) by using a mirror in hard-to-reach areas.

Complexity of welding: welding of invisible part of welds in hard-to-reach areas (for example, in a heat exchanger between pipes) by using a mirror.

Three phases of testing were performed:
1. Welding of a specimen at an angle of 45° (position HL-045);
2. Welding of a hard-to-reach specimen in the upright position (with a mirror);
3. Welding of a hard-to-reach specimen at an angle of 45° by using a mirror.

After welding, the weld quality is determined by applying the NDT methods.







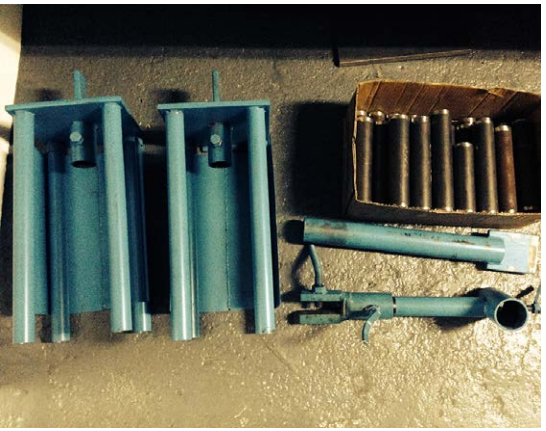






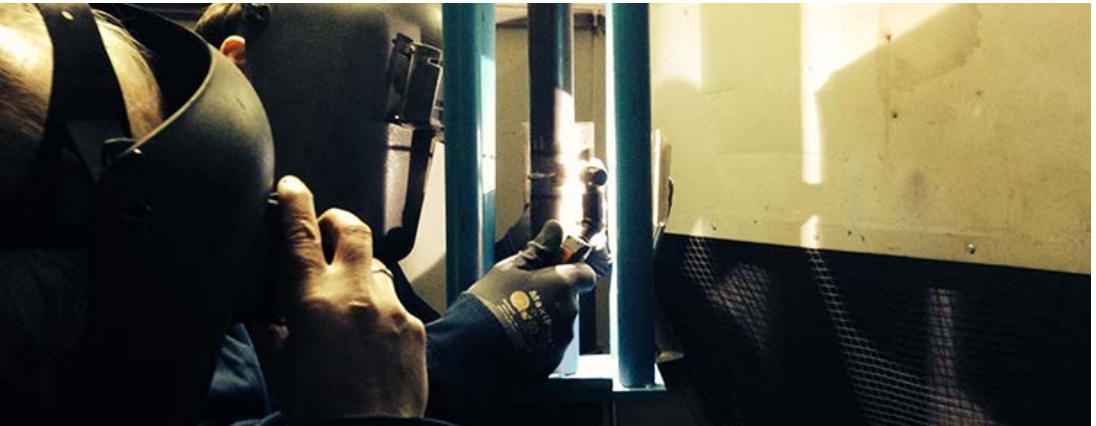


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MME GROUP

MATERIAAL METINGEN TESTGROEP
Niet Destructief Onderzoek

NON-DESTRUCTIVE TESTING REPORT Page 1 of
NIET-DESTRUCTIEF ONDERZOEK RAPPORT **ND**

MM order nr.: **1402019** Report / Rapport

Cliënt: / klant:	NEW Energy Services	Project: / Project:	Laskwalificatie
Test location: / Plaats onderzoek:	Hengelo	Subject: / Onderwerp:	3x Pijp
Order number: / Order nummer:	998-1140110		
Reference client: / Referentie klant:	G.J.	Subject no.: / Werkstuk nr.:	Request no.: / Opdracht nr.: 17912
Examination: / Soort onderzoek:	Radiografic examination	Drawing no.: / Tekening. nr.:	
Code : / Norm :	STW, RTOD T0110 / T0111	Material type: / Materiaal soort : St35.8	Heat treat: / Warmtebeh.: no
Acceptance : / Acceptatie :	STW, RTOD T0201	Weld process : / Las methode : GTAW	Weld preparation: / Las voorbewerking: V

RADIOGRAPHIC EXAMINATION / RADIOGRAFISCH ONDERZOEK **RT**

Procedure: / Procedure:	MM15100	Revision / Revisie	: 8	Source / Equipment: / Bron / Apparaat:	Philips CP ID.nr.: MM 430 /
Films per filmhouder: / Films per film holder:	1	Eff. Focal spot: / Eff. Brandvlek:	4mm	Techniek	1. 2. 3. 4. 5. 6. 7.
Filmbrand: / Filmmerk:	AGFA	IQI type: / IKI soort:	10 FE EN		
Part examined : / Onderzochte gedeelte:	Weld			Date(s) of examination: / Datum(s) van onderzoek:	10-01-2014

Table1: Settings / Tabel 1: Instellingen

No. Nr.	f. (mm)	Dia. (inch)	kV / mA Ci	Exp. Time Bel.tijd		FFD FFA (mm)	SSOFD BZOFA (mm)	SOD BOA (mm)	Film type	Film size Film afmeting	Radiographic technique Radiografische techniek	IQI position IKI locatie
1	2.6	ø 42	160/5	0 min.	40 sec.	800	42	748	D5	06x16	6	Filmside
2	4	ø 37.3	190/5	0 min.	40 sec.	800	37	763	D5	06x16	6	Filmside
3				min.	sec.							
4				min.	sec.							

Table2: Results / Tabel 2: Resultaten

Item/Weld Object/Las	Filmno.Film nr.	Table1 row no. Tabel 1 rij nr.	Welder(s) Lasser(s)	Density Zwarting	Wire Draad	Defect location (cm) Fout locatie (cm)	Defect identification Fout identificatie	Result Resultaat
W1	1	1	Faustas	2.4	15			Acceptable
	2	1	Faustas	2.4	15		Aa	Acceptable
	3	1	Faustas	2.4	15			Acceptable
W1	1	1	borisovas	2.4	15		H	Acceptable
	2	1	borisovas	2.4	15			Acceptable
	3	1	borisovas	2.4	15		H	Acceptable
W1	1	1	Zamalaitis	2.4	15			Acceptable
	2	1	Zamalaitis	2.4	15			Acceptable
	3	1	Zamalaitis	2.4	15			Acceptable

Remarks/Opmerkingen: --

MATERIAAL METINGEN TESTGROEP / NDO J.Breuring SKO Reg. 96887

Films interpreted by: / Films beoordeeld door: J.Breuring FL 2 Date: / Datum: 10-01-2014 Signature: / Handtekening:

Technician/Onderzoeker(s)	Level:	Manufacturer/Fabrikant:	Cliënt/Klant	Insp.Authority/Keur instantie:
J. Breuring	2			
MATERIAAL METINGEN TESTGROEP / NDO J. Breuring SKO Reg. 96887				
Date of report: / Rapport datum: 10-01-2014		Fabrication date: / Fabricatie datum:	Date: / Datum:	Date: / Datum:

MDT-RT-100-Rev.1 / FC13

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