

1. Parameters of the examination:

Sales designation of the coating material:

Shoppriemer Hydro NeoWeld

Characteristic pigment-base:

Ironoxyde/ Aluminiumoxyde

Characteristic binding agent:

Acryl/ Polymer

Filler metal:

		Chem. composition (% mass fraction)				
		C	Si	Mn	P	S
ISO 14341-A-G 3Si1		0,06 - 0,14	0,7 - 1,0	1,3 - 1,6	0,025	0,025

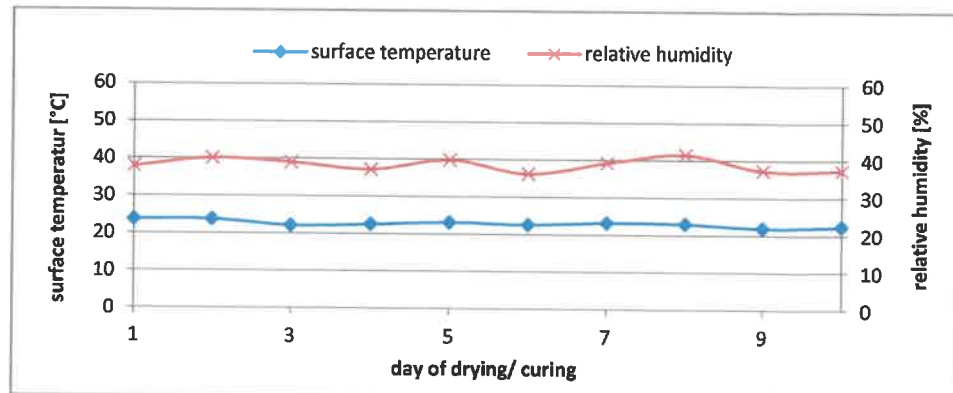
Base material:

DIN EN 10278 - C10	C	Si	Mn	P	S
12 x 50 x 200 mm	0,10	0,16	0,44	0,03	0,02
20 x 80 x 200 mm	0,09	0,22	0,52	0,03	0,03

Welding parameters:

Parameter:	Value:
Welding process	DIN EN ISO 4063 - 135
Weld current	250 ± 5% A
Voltage	30 ± 5% V
Weld speed	300 ± 5% mm/min
Type of shield gas	C1: 100 % CO ₂ acc. DIN EN ISO 14175
Gas flow	15 l/min
Gas nozzle diameter	19 mm
Nozzle distance to base material	18 mm
Filler metal	ISO 14341-A-G 3Si1
Filler metal, Ø	1,2 mm
Polarity	DC +

Climate record:



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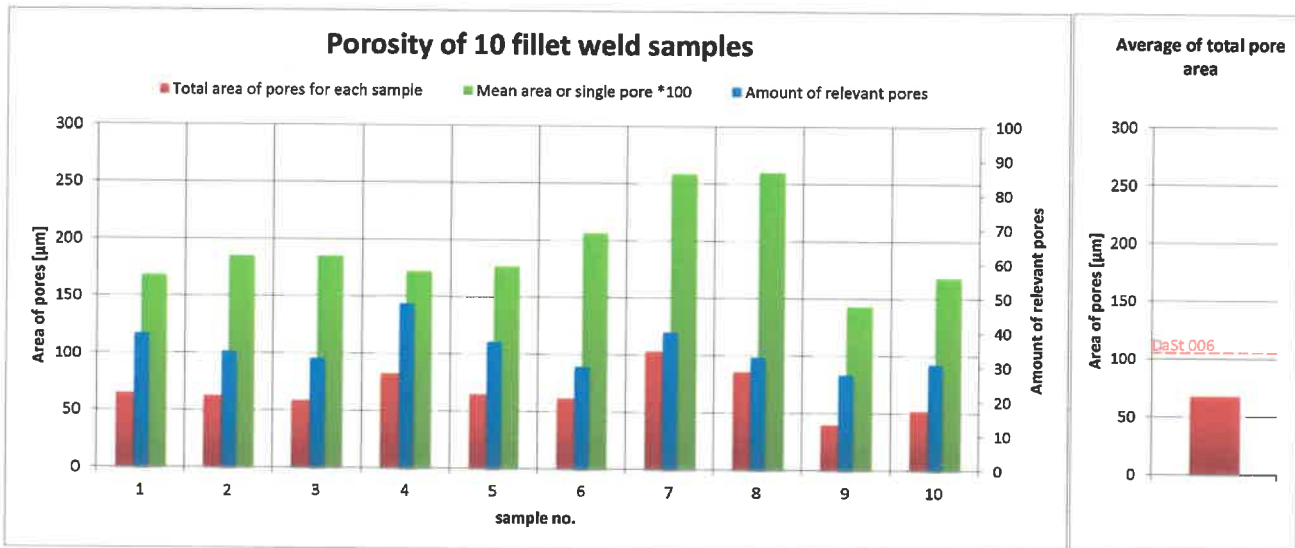
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2. Porosity analysis:

Total amount of pores $d > 0,5 \text{ mm}$
Total area of pores for each sample
Mean area of single pore

n
F [mm²]
F/n [mm²]

Sample no.										Ø
1	2	3	4	5	6	7	8	9	10	Average
39	34	32	48	37	30	40	33	28	31	35,20
65,66	62,91	59,29	82,57	65,56	62,10	103,56	85,86	40,14	52,20	67,99
1,68	1,85	1,85	1,72	1,77	2,07	2,59	2,60	1,43	1,68	1,93



The mean total area of pores is:

67,99 mm²

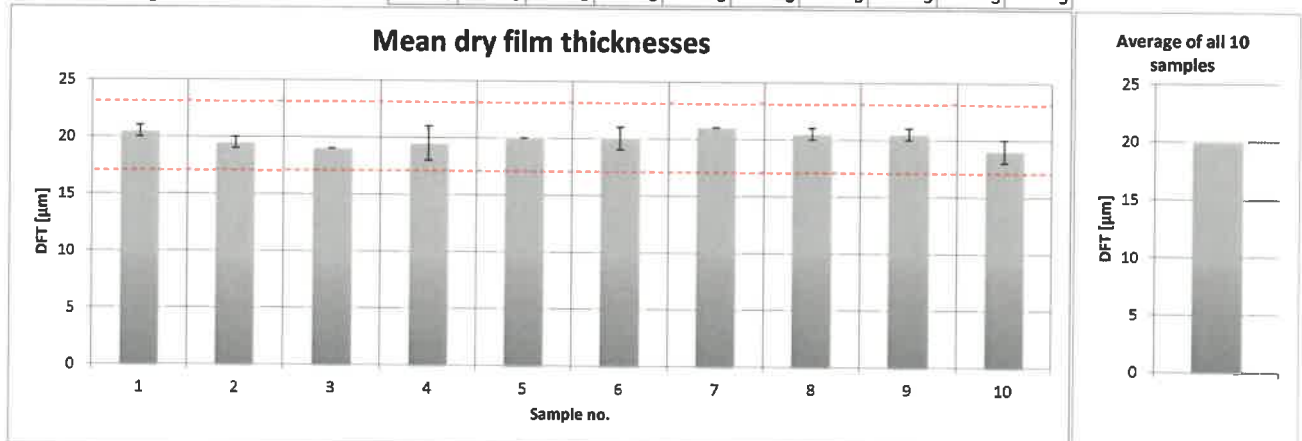
The acceptance requirements according to DaSt-Guideline 006 are met.

3. Film thicknesses:

Dry film thickness (DFT) Ø
Max
Min
Number of readings

µm
µm
µm

Sample no.										Ø
1	2	3	4	5	6	7	8	9	10	Average
20,50	19,50	19,00	19,50	20,00	20,00	21,00	20,50	20,50	19,00	19,95
21,00	20,00	19,00	21,00	20,00	21,00	21,00	21,00	21,00	20,00	
20,00	19,00	19,00	18,00	20,00	19,00	21,00	20,00	20,00	18,00	
3	3	3	3	3	3	3	3	3	3	



The nominal film thickness is:
Permissible tolerance range
DFT (Average 10 samples)

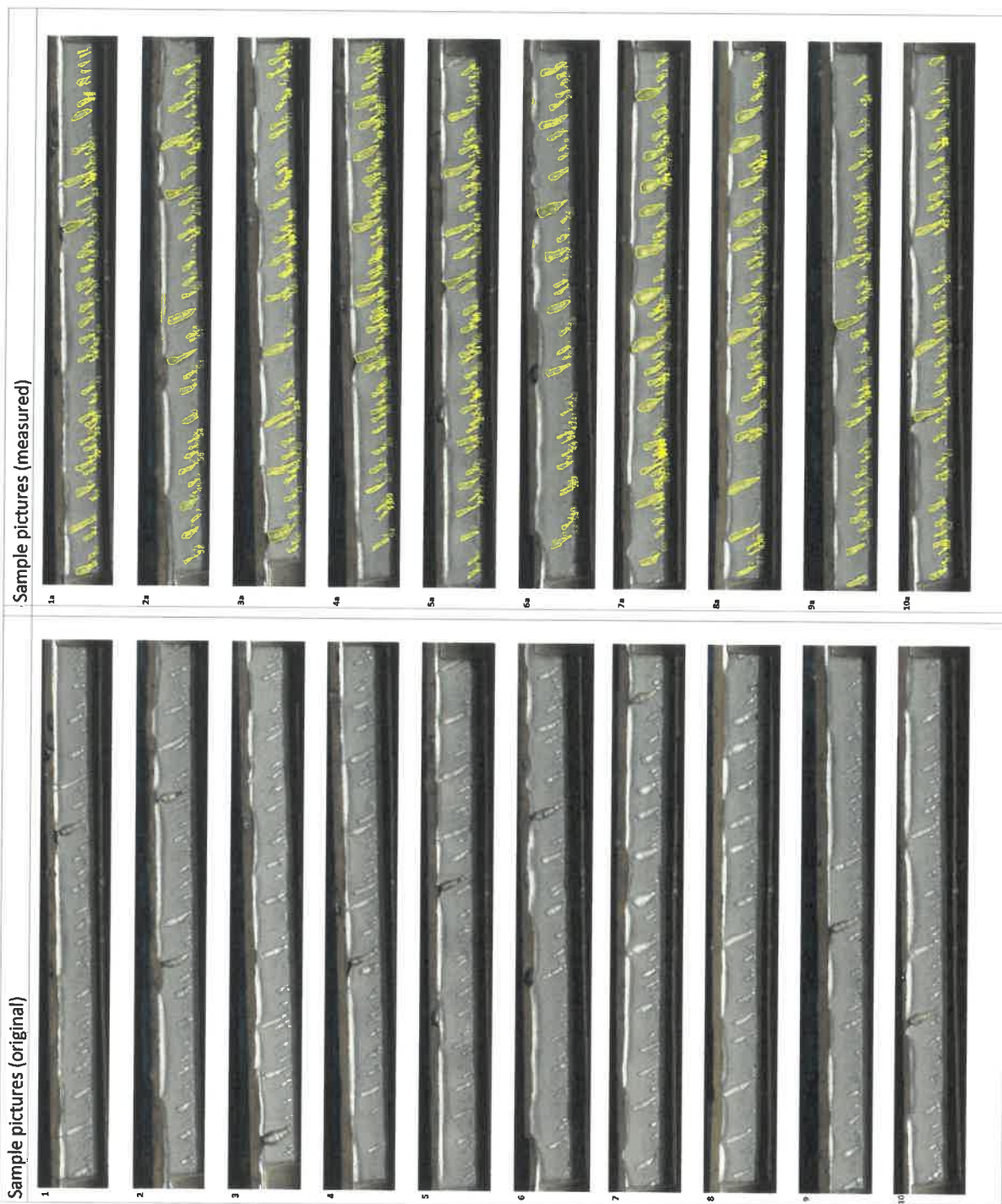
20 µm
17-23 µm
19,95 µm

The layer thicknesses shown above were measured by magnetic induction with the following coating thickness gauge:
elcometer 456, SLV Inv.Nr. 27916

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4. Photographic record:



5. Gas Emission test:

For detection of gas emission Dräger measuring system was used to pick up samples in the area of the welders breathing zone. The following test tubes were used:

Parameters:

		Test tube no.	No. of strokes	Measuring range [ml/m ³]
Carbon monoxide	CO	CH 25601	5	5 - 150
Carbon dioxide	CO ₂	CH 23501	5	100 - 12000
Nitrous gases	NO, NO ₂	CH 29401	5	0,5 - 10
Formaldehyde	HCHO	6733081	10	0,5 - 5
Cyanide	HCN	CH 25701	10	0,5 - 5

Results

The concentrations determined for the individual gases are listed in the following table:

	Concentrations in ml/m ³ (ppm)				
	CO	CO ₂	NO, NO ₂	HCHO	HCN
Threshold limit values (MAK)	30	5000	3	0,5	1,9
Determined concentration	10	1000	1	0	0

The gas concentrations detected underrun the Threshold limit values.

- Section "5. Gas emission test" is not part of the laboratory accreditation D-PL-17370-01-00 -

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6. Declaration:

The present study was carried out in accordance with DIN EN ISO 17652-2:2003, formerly DVS guideline 0501, issued 1976th. The provisions of this standard have been met.

The application of this standard/ guideline leads to excessive pore generation. This excessive pore generation is necessary to provide reproducibility and differentiability. In case of conflict the original German test shall govern.

7. Overall evaluation:

7.1 Porosity analysis

The mean total area of pores is: 67,99 mm².

The acceptance requirements according to DaSt-Guideline 006 are met.

7.2 Gas emission test

The gas concentrations detected underrun the Threshold limit values.