

### QUALITY CERTIFICATE

№ 2311-110 Date: 11.11.2023

**Manufacturer: PlasmaTec LLC**

18 Pravednykiv svitu str., Vinnytsia, Vinnytsia region,  
Vinnytsia district, Ukraine, 21036

Product	
Welding electrodes Monolith 7018-1 H4R TM MONOLITH d 3.2 mm: vacuum 2 kg	
Specification/Classification	AWS A5.1 / SFA-5.1: E7018-1 H4R CSA W48 E4918-1 H4 EN ISO 2560-A- E 46 5 B 3 2 H5
Batch classification according to EN ISO 14344	<b>C5</b>
Lot Number	<b>006</b>

#### Mechanical properties of weld metal according to EN 10204, type 2.2

Index	Requirements		Typical data
	(EN ISO 2560)	(AWS A5.1)	
Tensile strength, MPa (N/mm <sup>2</sup> ) / (ksi)	530 - 680	min. 70	574 (83)
Elongation, %	min. 20	min. 22	29
Yield strength, MPa (N/mm <sup>2</sup> ) / (ksi)	min. 460	min. 58	497 (72)
Diffusible hydrogen, ml/100g	max. 5	max. 4	3.5
Impact energy (KV), J (-50°C) / (-45°C/-50°F)	min. 47	min. 27	61/64/62

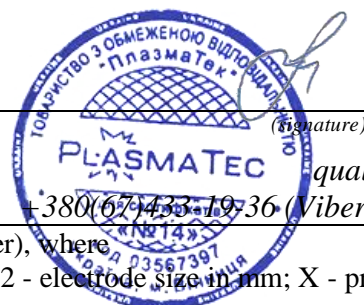
#### Chemical analysis of weld metal, % according to EN 10204, type 3.1

Index	Requirements (AWS A5.1)	Actual data
C	max. 0.15	0.08
Si	max. 0.75	0.6
Mn	max. 1.6	1.4
P	max. 0.035	0.025
S	max. 0.035	0.009
Cr	max. 0.2	0.05
Ni	max. 0.3	0.02
Mo	max. 0.3	0.01
V	max. 0.08	0.01
Mn+Cr+Ni+Mo+V	max. 1.75	1.49

#### Post weld heat treatment - As welded

The product was manufactured and supplied according to a Quality System Program that meets the requirements of ISO 9001. The manufacturer guarantees that the product meets the requirements of the specification(s) indicated. The delivery conditions are in accordance with EN ISO 544.

**Head of Technical Control: Andrii Babyn**



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Lot Number identification: **001 3.2 XO** (example of Lot number), where  
**001** – actual Lot Number, 3.2 XO - additional information (3.2 - electrode size in mm; X - pressing team, O - packing team).