

QUALITY CERTIFICATE

№ **2502-018** Issued Date: **03.02.2025**

Manufacturer: PlasmaTec LLC
18 Pravednykiv svitu str., Vinnytsia, Vinnytsia region, Vinnytsia district, Ukraine, 21036

Customer: Monolith Bison Inc
501-10022 110 Street Nw, Edmonton, Alberta, T6V 0C6, Canada

| Product |
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| Welding electrodes Monolith 7018-1 H4R TM MONOLITH d 4 mm (5/32"): vacuum 5 kg (11 LB) |

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|---|--|
| Specification/Classification | AWS A5.1 / SFA-5.1: E7018-1 H4R EN ISO 2560-A- E 46 5 B 3 2 H5 CSA W48: E4918-1 H4 4Y46H5 |
| Batch classification according to EN ISO 14344 | C5 |
| Lot Number | 001 |

Mechanical properties of weld metal EN 10204, type 2.2

| Index | Requirements (AWS A5.1) | Typical data |
|--|-------------------------|--------------|
| Tensile strength, (MPa/ksi) | min. 490 (70) | 580 (84) |
| Elongation, % | min. 22 | 37 |
| Yield strength, (MPa/ksi) | min. 400 (58) | 504 (73) |
| Impact energy (KV), J/(ft-lb) (-50°C/-58°F) | min. 27 (20) | 95 (70) |
| Diffusible hydrogen, ml/100g | max. 4 | 2.6 |

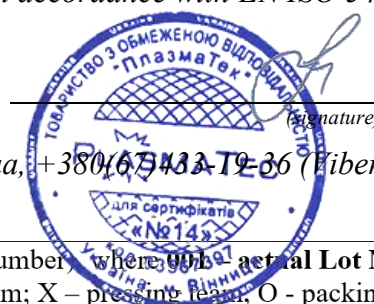
Chemical analysis of weld metal, % EN 10204, type 3.1

| Index | Requirements (AWS A5.1) | Actual data |
|----------------------|-------------------------|-------------|
| C | max. 0.15 | 0.09 |
| Si | max. 0.75 | 0.68 |
| Mn | max. 1.6 | 1.33 |
| P | max. 0.035 | 0.021 |
| S | max. 0.035 | 0.006 |
| Cr | max. 0.2 | 0.08 |
| Ni | max. 0.3 | 0.03 |
| Mo | max. 0.3 | 0.004 |
| V | max. 0.08 | 0.01 |
| Mn+Cr+Ni+Mo+V | max. 1.75 | 1.454 |

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 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))