

**WELDING PROCEDURE QUALIFICATION RECORD FORM (WPQR)**

EN ISO 15614-1:2017

**WELDING PROCEDURE QUALIFICATION TEST CERTIFICATE**

|               |                           |                          |                     |
|---------------|---------------------------|--------------------------|---------------------|
| WPS No:       | 01/26                     | Examining body:          | EUROCERT S.A.       |
| Manufacturer: | KS CONSTRUCTION GROUP IKE | Reference No:            | 10.24.0601.01       |
| Address:      | VEROIA , GREECE           | Code / Testing Standard: | EN ISO 15614-1:2017 |
| Level:        | 2                         | Date of Welding:         | 22/12/2025          |

**Range of qualification**

|                                      |                                                                                                                 |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Product Form:                        | PIPE                                                                                                            |
| Welding Process(es):                 | 142                                                                                                             |
| Type of joint:& weld                 | Full and Partial Penetration BUTT WELDS, branch connections with an angle $\alpha \geq 60^\circ$ , FILLET WELDS |
| Parent Metal(s) group:               | 8.1 steels in the same sub-group and any lower sub-group within the same group                                  |
| Parent Metal Thickness (mm):         | 1 to 4                                                                                                          |
| Deposited Metal Thickness (mm):      | Max 4                                                                                                           |
| Throat Thickness (mm)                | -                                                                                                               |
| Single run/Multi run                 | Single run                                                                                                      |
| Outside Pipe Diameter (mm):          | >57.15                                                                                                          |
| Filler Metal Designation:            | -                                                                                                               |
| Filler Material Make                 | -                                                                                                               |
| Filler Material Size (mm)            | -                                                                                                               |
| Designation of Shielding Gas / Flux: | EN 14175 I1                                                                                                     |
| Designation of Backing Gas           | EN 14175 I1                                                                                                     |
| Type of Welding Current: & Polarity  | DC (-)                                                                                                          |
| Transfer Mode:                       | -                                                                                                               |
| Heat Input                           | -                                                                                                               |
| Welding Positions:                   | All welding Positions                                                                                           |
| Preheat Temperature                  | -                                                                                                               |
| Interpass Temperature                | -                                                                                                               |
| Post-Heating                         | -                                                                                                               |
| Post – Weld Heat Treatment           | -                                                                                                               |
| Other Information:                   | -                                                                                                               |

We confirm that the statements in this record are correct and that the test pieces were prepared, welded, tested and have fulfilled the requirements in accordance with ISO 15614-1

|                    |               |                        |
|--------------------|---------------|------------------------|
| Location           | Date of Issue | Test Body / Surveyor   |
| METAMORFOSI GREECE | 08/01/2026    | EUROCERT SA/ P. TERZIS |



**RECORD OF WELD TEST**  
**EN ISO 15614-1:2017**

|                                            |                                                              |
|--------------------------------------------|--------------------------------------------------------------|
| Location: VEROIA , GREECE                  | Examiner or test body: EUROCERT S.A.                         |
| WPS No: 01/26                              | Method of Preparation and cleaning: Cutting and Grinding     |
| WPQR No: 10.24.0601.01                     | Parent Material Specification: AISI 304L , 1.4307-EN 10217-7 |
| Manufacturer: KS CONSTRUCTION GROUP IKE    | Material Thickness (mm): 2                                   |
| Welders/Operator's Name: KELESIDIS STAVROS | Outside Pipe diameter (mm): 114.3                            |
| Joint Type: BUTT WELD                      | Welding Position: HL-045                                     |

Weld Preparation details (sketch):

| Joint Design | Welding Sequences |
|--------------|-------------------|
|              |                   |

Welding Details

| Run | Process | Size of Filler Metal | Current A | Voltage V | Type of current / Polarity | Wire Feed Speed mm/min | Travel Speed mm/min | Heat Input kJ/mm | Metal Transfer |
|-----|---------|----------------------|-----------|-----------|----------------------------|------------------------|---------------------|------------------|----------------|
| 1   | 142     | -                    | 65-22     | 9,1-7,4   | DC (-)                     | -                      | 263,8               | 0,09-0,03        | -              |

Filler Metal Classification: -

|                                                                |                                                                                                                 |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Any Special Baking or Drying: -                                |                                                                                                                 |
| Gas / Flux: - Shielding: EN 14175 II<br>Backing: EN 14175 II   | Heating and Cooling Rates: -                                                                                    |
| Gas Flow Rate - Shielding: 10-11 lt/min<br>Backing: 8-9 lt/min | Other Information (If Required): ss nb, sl, Orbital Welding<br>Polysoude-EWM<br>Weaving (Maximum Width of Run): |
| Tungsten electrode Type / Size: -                              | Oscillation:                                                                                                    |
| Details of Back Gouging / Backing: GAS<br>BACKING              | Pulse welding details: -                                                                                        |
| Preheat Temperature: -                                         | Stand off Distance:-                                                                                            |
| Interpass Temperature: -                                       | Plasma welding details:                                                                                         |
| Post heating: -                                                | Torch angle: 90                                                                                                 |
| Post Weld Heat Treatment and/or Ageing:-                       | Nozzle Diameter :18 mm                                                                                          |
| Time, Temperature, Method:-                                    |                                                                                                                 |

| Manufacturer /Date                     | Test Body / Surveyor/Date          |
|----------------------------------------|------------------------------------|
| KS CONSTRUCTION GROUP IKE / 08/01/2026 | EUROCERT SA / PTERZIS / 08/01/2026 |

# TEST RESULTS



Reference No. 10.24.0601.01

Visual Examination: **ACCEPTABLE – VT/T/25/307**

Radiography\* **ACCEPTABLE – RT/T/25/451**

Penetrant/Magnetic **ACCEPTABLE**

Particle Test\* **LPT/T/25/261**

Ultrasonic Test \* -

## Tensile Test ACCEPTED – TT/T/25/030

| Type/No. | Tensile Strength (Rm) N/mm <sup>2</sup> | Yield Strength (Re) N/mm <sup>2</sup> | Elongation n (A % on) | Reduction Of Area (Z%) | Fracture Location | Test Temperature (°C) | Remarks |
|----------|-----------------------------------------|---------------------------------------|-----------------------|------------------------|-------------------|-----------------------|---------|
| WT1A     | 545,17                                  |                                       |                       |                        | BM                | 21 C                  |         |
| WT1B     | 538,98                                  |                                       |                       |                        | BM                | 21 C                  |         |

## Bend Tests ACCEPTABLE - BT/T/25/046

| Type/No. | Bend Angle | Elongation* | Results    |
|----------|------------|-------------|------------|
| FBB1     | 180o       |             | ACCEPTABLE |
| FBB2     | 180o       |             | ACCEPTABLE |
| RBB1     | 180o       |             | ACCEPTABLE |
| RBB2     | 180o       |             | ACCEPTABLE |

Macro Examination: **ACCEPTABLE**  
Macro/T/25/227

Micro Examination\*:

## Impact Tests\* -

| Notch Location / Direction | Temp. °C | Values 1 2 3 | Average | Remarks |
|----------------------------|----------|--------------|---------|---------|
|                            |          |              |         |         |
|                            |          |              |         |         |

## Hardness Tests: -

Location of Measurements (see report)

Tests carried out in accordance with the requirements of: EN ISO 15614-1:2017

Laboratory Report Reference No.

**T.C.L. Co. - Test & Control Laboratories**

Test results were acceptable/~~not acceptable~~

Test carried out in the presence of

A. DIPSAKIS

08/01/2025

By **T.C.L. Co. - Test & Control Laboratories**