



Report No. **F17096/2**

Vienna, 16/11/2017

TEST REPORT

Applicant:

ArcelorMittal Ostrava a.s.

Address:

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Czech Republic

Reference and date of order:

Email from Mr. Scheibe 19/10/2017

Subject:

Verification of weldability of formwork tie Ø20mm and Ø26,5mm

English version of report F17096/2

*“Nachweis der Schweißbarkeit von Schalungsankern Ø20mm und
Ø26,5mm ”*

Date of test procedure: 26/09/2017 to 17/10/2017

Location of test procedure: Strength Testing Laboratory of Schweißtechnische Zentralanstalt, Vienna

This test report consists of 2 pages and 20 enclosures.

Data and conclusions exclusively refer to the handed over test specimen. The test specimens are kept 3 month. In case of duplication or a public use of this test report contents may be passed on only literally without omission and without additive. Also shortened excerpts require special permission.

1. SUBJECT OF TEST

ArcelorMittal assigned the Strength Testing Laboratory of Schweißtechnische Zentralanstalt (SZA) to carry out 12 tensile tests to verify the weldability of formwork ties KT20 and KT26,5.

2. SAMPLE PREPERATION

The tensile specimens have been manufactured according to the clients welding instructions. The welding procedures manual MAG welding and manual arc welding have been used. The welding parameters voltage, amperage and wire feed were optimized by the SZA. 4 specimens (1 as spare specimen) have been manufactured for each welding procedure and each diameter.

The raw material was provided by the client.

ArcelorMittal's welding procedures can be found in Annex A.1, Figure A.1 and Annex A.2, Figure A.2.

The welding was carried out by the SZA. The welding parameters can be found in Annex A.3, Figure A.3 to Annex A.4, Figure A.6.

Pictures of the welded specimens can be found in Annex A.2, Figure A.3 and Figure A.4.

3. TEST PROCEDURE AND RESUME

The tensile tests have been carried out according to ÖNORM EN ISO 15630-1:2011.

A picture of the test setup can be found in Annex B.6, Figure B.1.

The results of the tests are shown in Annex B.1 to Annex B.5.

The fracture positions are shown in Annex C.1, Figure C.1 to Annex C.2, Figure C.4.

From Annex D.1, Figure D.1 to Annex D.3, Figure D.6 force-displacement diagrams for the specimen Ø20mm are shown (only informative).

From Annex E.1, Figure E.1 to Annex E.3, Figure E.6 force-displacement diagrams for the specimen Ø26,5mm are shown.

The force-displacement diagrams only serves as information.

Resume

The tensile tests for both diameters have shown that the tensile strengths of the weldments of both welding procedures are greater than the specified tensile strength of the formwork tie.

Johannes Schwayer
Strength Testing Laboratory



Dr. Thomas Vogl
Head – Strength Testing Laboratory