

Information sheet

Proficiency tests metal 2018

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| Organiser: | Institut für Eignungsprüfung IfEP GmbH, Marl, Germany |
| Registration: | By means of the attached form |
| Intention: | Confirmation of technical competence of participating laboratories |
| Data evaluation: | Based on ISO/IEC 17043 and ISO 13528. Usually the participation is approved for accreditations according to NADCAP. |
| Confidentiality: | Each laboratory receives a specific code number |
| Documentation: | Certificate Final report with a list of participants in alphabetical order with declaration of consent; determination of measurement uncertainty according to the current standards and guidelines. Details for subcontracting of single parts: please see www.ifep.de , section „proficiency tests“ |

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|---|---|---|
| No. 1801-1 Hardness testing Brinell | Test standard: | ISO 6506, part 1, HBW 2,5/187,5 |
| | Material: | Certified reference hardness test block (MPA NRW Dortmund, Germany) |
| | Test program: | five hardness measurements on certified reference hardness test block |
| | Test sequence: | Each hardness test block will be tested by several participants. There will be an arrangement of the dates in advance. |
| | Results to be submitted: | five hardness values of the hardness test blocks |
| | Assigned value: | Certified reference values of MPA NRW Dortmund, Germany |
| | Additional information provided by organiser: | Statement to measurement uncertainty |
| | Participation fee: | Germany 330 € other countries + transport costs* estimated start: II. quarter 2018 |

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| No. 1801-2 Hardness testing Rockwell C | Test standard: | ISO 6508, part 1, HRC |
| | Material: | Certified reference hardness test blocks (MPA NRW Dortmund, Germany) |
| | Test program: | 3 x five hardness measurements on certified reference hardness test blocks |
| | Test sequence: | Each hardness test block set will be tested by several participants. There will be an arrangement of the dates in advance. |
| | Results to be submitted: | 3 x five hardness values of the hardness test blocks |
| | Assigned Value: | Certified reference values of MPA NRW Dortmund, Germany |
| | Additional information provided by organiser: | Statement to measurement uncertainty |
| | Participation fee: | Germany 330 € other countries + transport costs* estimated start: II. quarter 2018 |

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|---|---|--|
| No. 1801-3 Hardness testing Vickers | Test standard: | ISO 6507, part 1, HV 1, HV 10/HV 30 |
| | Material: | Certified reference hardness test block (MPA NRW Dortmund, Germany) |
| | Test program: | five hardness measurements on certified reference hardness test block |
| | Test sequence: | Each hardness test block will be tested by several participants. There will be an arrangement of the dates in advance. |
| | Results to be submitted: | five hardness values of the hardness test blocks |
| | Assigned value: | Certified reference values of MPA NRW Dortmund, Germany |
| | Additional information provided by organiser: | Statement to measurement uncertainty |
| | Participation fee: | HV 1 or HV 10/HV 30: Germany 330 € other countries + transport costs* HV 1 and HV 10/HV 30: Germany 490 € other countries + transport costs* estimated start: II. quarter 2018 |

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| No. 1802 Mobile hardness testing | Test Standard: | All mobile methods are accepted; Leeb (HLD), UCI, TIV |
| | Material: | Reference specimens |
| | Production of specimens: | By the organiser |
| | Test sequence: | Each reference specimen will be tested by several participants. There will be an arrangement of the dates in advance. |
| | Results to be submitted: | 5 hardness values according to the method used |
| | Assigned value: | Reference value |
| | Participation fee: | Germany 380 € other countries + transport costs* estimated start: III. quarter 2018 |

* Prices excl. valid VAT, transport costs, see www.ifep.eu

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| No. 1803 Emission spectrometry steel | Test standard: | In-house procedure |
| | Material: | Material similar to daily laboratory work (no „synthetic alloy“) a) low alloyed steel b) high alloyed steel |
| | Results to be submitted: | Characteristic values according to specifications |
| | Assigned value: | Consensus value calculated from the results of all participants |
| | Additional information: | Statement to measurement uncertainty |
| | Participation fee: | One alloy: Germany 310 € other countries + transport costs* Two alloys: Germany 550 € other countries + transport costs* estimated start: II. quarter 2018 |
| No. 1804 Emission spectrometry (non ferrous- metals) | Test standard: | In-house procedure |
| | Material: | Material similar to daily laboratory work (no „synthetic alloy“) Aluminium-alloy |
| | Results to be submitted: | Characteristic values according to specifications |
| | Assigned value: | Consensus value calculated from the results of all the participants |
| | Additional information: | Statement to measurement uncertainty |
| | Participation fee: | Germany 310 € other countries + transport costs* estimated start: II. quarter 2018 |
| No. 1805 Resistance against intergranular attack | Test Standard: | ASTM A262, practice B, Streicher test |
| | Material: | Stainless steel |
| | Production of specimens: | By the organiser |
| | Results to be submitted: | Mass loss |
| | Assigned value: | Consensus value calculated from the results of all participants |
| | Participation fee: | Germany 310 € other countries + transport costs* estimated start: III. quarter 2018 |
| No. 1806 Indirect verification of salt spray test chamber | Test standard: | ISO 9227 |
| | Material: | Reference specimens |
| | Production of specimens: | by the organiser |
| | Results to be submitted: | Mass loss |
| | Assigned value: | Reference value |
| | Participation fee: | Germany 275 € other countries + transport costs* estimated start: III. quarter 2018 |
| No. 1807-1 Tensile test aluminium (round specimens) | Test standard: | ISO 6892-1 |
| | Material: | 6 round test specimens, aluminium, $d_0 = 6$ mm, specimen head: ISO thread M10, and/or 6 material sections, diameter 16 mm, length 110 mm each |
| | Production of specimens: | by the organiser / by the participants |
| | Results to be submitted: | Characteristic values according to the test standard, additionally "Young's Module" and the measurement uncertainty |
| | Assigned Value: | Consensus values calculated from the results of the participants |
| | Additional information: | Statement to the influence of specimen preparation, to measurement uncertainty of the test method |
| | Participation fee: | 1807-1M: Machined specimens: Germany 370 € other countries + transport costs* 1807-1U: Unmachined specimens: Germany 290 € other countries + transport costs* Machined AND unmachined specimens: Germany 600 € other countries + transport costs* estimated start: III. quarter 2018 |

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| No. 1807-2 Tensile test aluminium (flat specimens) | Test standard: | ISO 6892-1 |
| | Material: | 6 flat specimens, aluminium, geometry according to ISO 6892-1 (2009), annex B, table B2, $a_0 = 1$ mm, $b_0 = 20$ mm, and/or 6 material sections of about 32 x 280 mm ² each |
| | Production of specimens: | by the organiser / by the participants |
| | Results to be submitted: | Characteristic values according to the test standard, additionally "Young's Module" and the measurement uncertainty |
| | Assigned Value: | Consensus values calculated from the results of the participants |
| | Additional information: | Statement to the influence of specimen preparation, to measurement uncertainty of the test method |
| | Participation fee: | 1807-2M: Machined specimens: Germany 300 € other countries + transport costs* 1807-2U: Unmachined specimens: Germany 255 € other countries + transport costs* Machined AND unmachined specimens: Germany 500 € other countries + transport costs* estimated start: III. quarter 2018 |
| No. 1808 Non-destructive testing | Test standard: | UT, MT |
| | Material: | UT: Steel specimens with defined flaws MT: Steel specimens app. 200 x 200 x 10 mm ³ with weld seam in the middle, with flaws defined for the test method |
| | Results to be submitted: | Type / position / size of flaws |
| | Assigned value: | MT: Sample solution of Fraunhofer IZFP Saarbrücken, Germany UT: true value |
| | Test sequence: | Each sample will be tested by several participants. There will be an arrangement of the dates in advance. |
| | Participation fee: | One method: Germany 350 € other countries + transport costs* Two methods: Germany 620 € other countries + transport costs* estimated start: III. quarter 2018 |
| No. 1809 Tensile test steel (round specimens) | Test standard: | ISO 6892-1 |
| | Material: | Standard samples: 6 round test specimens, steel, $d_0 = 10$ mm, specimen head: ISO thread M16 as per standard, Alternate samples: specimens with $d_0 = 6$ mm, specimen head: ISO thread M10, and/or 6 material sections, diameter 26 mm, length 150 mm each. |
| | Production of specimens: | by the organiser / by the participants |
| | Results to be submitted: | Characteristic values according to the test standard, additionally "Young's Module" and the measurement uncertainty |
| | Assigned Value: | Consensus values calculated from the results of the participants |
| | Additional information: | Statement to the influence of specimen preparation, to measurement uncertainty of the test method |
| | Participation fee: | 1809M: Machined specimens: Germany 450 € other countries + transport costs* 1809U: Unmachined specimens: Germany 350 € other countries + transport costs* Machined AND unmachined specimens: Germany 700 € other countries + transport costs* estimated start: IV. quarter 2018 |

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| No. 1810 Tensile test steel flat specimens, 1 mm | Test standard: | ISO 6892-1 / ISO 10113 |
| | Material: | 6 flat specimens, steel, geometry according to ISO 6892-1 (2009), annex B, table B2, $a_0 = 1$ mm, $b_0 = 20$ mm, and/or 6 material sections of about 32 x 280 mm ² each |
| | Production of specimens: | by the organiser / by the participants |
| | Results to be submitted: | Characteristic values according to the test standard, including the R-value, additionally "Young's Module" and the measurement uncertainty |
| | Assigned Value: | Consensus values calculated from the results of the participants |
| | Additional information: | Statement to the influence of specimen preparation, to measurement uncertainty of the test method |
| | Participation fee: | 1810-1M: Machined specimens: Germany 330 € other countries + transport costs* 1810-1U: Unmachined specimens: Germany 285 € other countries + transport costs* Machined AND unmachined specimens: Germany 550 € other countries + transport costs* estimated start: IV. quarter 2018 |
| No. 1811 Charpy impact test ready to test specimens | Test standard: | ISO 148-1 / ISO 148-2 (2 mm striker) |
| | Material: | Charpy test specimens, impact energy low level (RT), average level (RT), high level (RT), super high level (RT) |
| | Production of specimens: | by the organiser |
| | Results to be submitted: | 5 values according to ISO 148 each energy level |
| | Assigned value: | Reference value, limits according to ISO 148-2 |
| | Additional information: | Measurement uncertainty according to ISO 148-2 |
| | Participation fee: | One energy level: Germany 310 € other countries + transport costs* Two energy levels: Germany 490 € other countries + transport costs* Three energy levels: Germany 630 € other countries + transport costs* Four energy levels: Germany 760 € other countries + transport costs* estimated start: IV. quarter 2018 |
| No. 1811 Charpy impact test unmachined specimens | Test standard: | ISO 148-1 / ISO 148-2 (2 mm striker) |
| | Material: | Charpy test specimens, impact energy low level (RT), average level (RT), high level (RT), super high level (RT) |
| | Production of specimens: | by the participants |
| | Results to be submitted: | 5 values according to ISO 148 each energy level |
| | Assigned value: | Reference value, limits according to ISO 148-2 |
| | Additional information: | Measurement uncertainty according to ISO 148-2 |
| | Participation fee: | One energy level: Germany 250 € other countries + transport costs* Two energy levels: Germany 400 € other countries + transport costs* Three energy levels: Germany 525 € other countries + transport costs* Four energy levels: Germany 660 € other countries + transport costs* estimated start: IV. quarter 2018 |

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| No. 1813 Metallography, image analysis | Test standard: | e.g. ISO 643, ASTM E 112 appointment also possible via digital image processing |
| | Material: | Micrograph; in part simulated, in digital form |
| | Results to be submitted: | e.g. grain size steel / phase content steel / phase content aluminium |
| | Assigned Value: | Consensus value, sample solution |
| | Participation fee: | Germany 255 €, other countries + transport costs* estimated start: IV. quarter 2018 |
| No. 1814 Metallography, sample preparation | Test standard: | e.g. ISO 643, ASTM E 112 |
| | Material: | Metallic samples for grinding preparation and analysis |
| | Results to be submitted: | e.g. carbon content, grain size |
| | Assigned Value: | Consensus value, sample solution |
| | Participation fee: | Germany 275 €, other countries + transport costs* estimated start: IV. quarter 2018 |

* Prices excl. valid VAT, transport costs, see www.ifep.eu

Registration proficiency tests metal 2018: part 1

via fax to: **+49 (0) 2365 / 209 00 35** or via e-mail to: **Sorge@ifep.de**

We will participate in the following proficiency test(s):

| No. | please mark | Proficiency test | Expected Start (quarter/2018) | Return of the results | Participation fee |
|---------|---|--|----------------------------------|-----------------------|---|
| 1801-1 | <input type="checkbox"/> | Hardness testing Brinell HBW 2,5/187,5 | II/2018 | 1 week | 330 €* |
| 1801-2 | <input type="checkbox"/> | Hardness testing Rockwell C | II/2018 | 1 week | 330 €* |
| 1801-3a | <input type="checkbox"/> | Hardness testing Vickers HV 1 | II/2018 | 1 week | 1801-3a or 1801-3b: total 330 €* 1801-3a and 1801-3b: total 490 €* |
| 1801-3b | <input type="checkbox"/> | Hardness testing Vickers HV 10/HV 30 | II/2018 | 1 week | |
| 1802 | <input type="checkbox"/> | Mobile hardness testing | III/2018 | 1 Week | 380 € |
| 1803a | <input type="checkbox"/> | Emission spectrometry low alloyed steel | II/2018 | 4 weeks | 1 alloy: total 310 €* 2 alloys: total 550 €* |
| 1803b | <input type="checkbox"/> | Emission spectrometry high alloyed steel | II/2018 | 4 weeks | |
| 1804 | <input type="checkbox"/> | Emission spectrometry Aluminium-alloy | II/2018 | 4 weeks | 310 €* |
| 1805 | <input type="checkbox"/> | Resistance to intergranular corrosion | III/2018 | 4 weeks | 310 €* |
| 1806 | <input type="checkbox"/> | Indirect verification of salt spray test chamber | III/2018 | 4 weeks | 275 €* |
| 1807-1M | <input type="checkbox"/> | Tensile test aluminium, round specimens machined specimens | III/2018 | 4 weeks | 1807-1M: 370 €* 1807-1U: 290 €* 1807-1M and 1807-1U: total 600 €* |
| 1807-1U | <input type="checkbox"/> | Tensile test aluminium, round specimens unmachined specimens | III/2018 | 4 weeks | |
| 1807-2M | <input type="checkbox"/> | Tensile test aluminium, flat specimens machined specimens | III/2018 | 4 weeks | 1807-2M: 300 €* 1807-2U: 255 €* 1807-2M and 1807-2U: total 500 €* |
| 1807-2U | <input type="checkbox"/> | Tensile test aluminium, flat specimens unmachined specimens | III/2018 | 4 weeks | |
| 1808a | <input type="checkbox"/> | UT, ultrasonic testing | III/2018 | 1 week | 1 method: total 350 €* 2 methods: total 620 €* |
| 1808b | <input type="checkbox"/> | MT, magnetic particle testing | III/2018 | 1 week | |
| 1809M | Standard samples: <input type="checkbox"/> Alternate samples: <input type="checkbox"/> | Tensile test steel round specimens machined specimens | IV/2018 | 4 weeks | 1809M: 450 €* 1809U: 350 €* 1809M and 1809U: total 700 €* |
| 1809U | <input type="checkbox"/> | Tensile test steel round specimens unmachined specimens | IV/2018 | 4 weeks | |
| 1810M | <input type="checkbox"/> | Tensile test steel flat specimens, 1 mm machined specimens | IV/2018 | 4 weeks | 1810-1M: 330 €* 1810-1U: 285 €* 1810-1M and 1810-1U: total 550 €* |
| 1810U | <input type="checkbox"/> | Tensile test steel flat specimens, 1 mm unmachined specimens | IV/2018 | 4 weeks | |
| 1811aM | <input type="checkbox"/> | Charpy impact test low level machined specimens | IV/2018 | 4 weeks | 1 level: total 310 €* 2 levels: total 490 €* 3 levels: total 630 €* 4 levels: total 760 €* |
| 1811bM | <input type="checkbox"/> | Charpy impact test average level machined specimens | | | |
| 1811cM | <input type="checkbox"/> | Charpy impact test high level machined specimens | | | |
| 1811dM | <input type="checkbox"/> | Charpy impact test super high level machined specimens | | | |
| 1811aU | <input type="checkbox"/> | Charpy impact test low level unmachined specimens | IV/2018 | 4 weeks | 1 level: total 250 €* 2 levels: total 400 €* 3 levels: total 525 €* 4 levels: total 660 €* |
| 1811bU | <input type="checkbox"/> | Charpy impact test average level unmachined specimens | | | |
| 1811cU | <input type="checkbox"/> | Charpy impact test high level unmachined specimens | | | |
| 1811dU | <input type="checkbox"/> | Charpy impact test super high level unmachined specimens | | | |

* Prices for Germany excl. VAT, other countries: Delivery and duty costs will be added to participation fee, see www.ifep.eu

**Continuation on the next page.
Please submit pages 6 and 7 for a binding order.**

Registration proficiency tests metal 2018: part 2

| No. | please mark | Proficiency test | Expected Start (quarter 2018) | Return of the results | Participation fee |
|------|--------------------------|-----------------------------------|----------------------------------|-----------------------|-------------------|
| 1813 | <input type="checkbox"/> | Metallography, image analysis | IV/2018 | 4 weeks | 255 € * |
| 1814 | <input type="checkbox"/> | Metallography, sample preparation | IV/2018 | 4 weeks | 275 € * |

* Prices for Germany excl. VAT, other countries: Delivery and duty costs will be added to participation fee, see www.ifep.eu

The costs will be invoiced by Institut für Eignungsprüfung IfEP GmbH **in advance**.

The organiser will charge 25 % of the fee if the registration is cancelled four weeks prior to the start of the proficiency test. For cancellations later than this, the full amount will be charged.

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|---|-------|----------|---|--|--|
| Company: | | | Date / signature / stamp | | |
| Department: | | | | | |
| Contact person: <input type="checkbox"/> Ms. <input type="checkbox"/> Mr. | | | | | |
| Address: | | | | | |
| ZIP Code: | City: | Country: | <input type="checkbox"/> German <input type="checkbox"/> English | | |
| Telephone: | Fax: | E-Mail: | | | |
| <u>Necessary additional information:</u> Your VAT identification number: | | | | | |
| Billing address (only if differing): | | | Delivery address (only if differing): | | |
| Further invoice-details, e.g. cost unit: | | | | | |
| I confirm with my signature that the service is carried out for my/our company (and not for a private person). | | | | | |

Please submit pages 6 and 7 for a binding order.