

## Laboratory Test Pricelist

### Performance of tests and storage of specimens

The execution of the tests will take place according to the order of acceptance.

The time to perform the tests and issue certificates will be communicated at the time of samples readiness basing on the number and type of tests required. Generally, the maximum time for the certificate release, as well as the necessary minimum time for the test execution according to related standards, is 10 days working.

Accordingly with the laboratory commitments, an urgent execution of test procedures (within 3 working days) can be agreed with an extra cost of 50%.

The Client and any other outsiders are not allowed to attend the trials unless explicitly agreed.

The test regulation applied is meant to be the 'last in force or one for which the Laboratory is accredited.

Whether tests with specific equipment not listed in the offer or Third Party Inspector's attendance (TÜV Nord, TÜV Sud, TÜV Rheinland, DNV etc.) is required, extra costs will be applied.

### Issuance of certificates

In case of simultaneous delivery of different materials to be tested you will be issued a certificate for each type and / or material (eg. rods, pipes, forgings, etc.) in consideration of the different test procedures.

The test results will be communicated only through the Certificates and / or test reports unless explicit and motivated request of the customer. The Certificates will be delivered to the customer brevimanu, via correspondence ordinary or by email.

The laboratory provides electronic and paper filing of certificates for 10 years, according to the procedures provided by law.

### Payments

At the end of the performance it is emitted regular invoice to the balance of which will have to provide as previously established agreements.

**TABLE 1 - TEST OF CORROSION**

Test	Duration	Price [€]	Machining
ASTM A262 Practice A	120 h	200,00 €	Included
ASTM A262 practice B	24 h	220,00 €	Included
ASTM A262 practice B	120 h	300,00 €	Included
ASTM A262 Practice C	5 cycles 48 h	420,00 €	Included
ASTM A262 Practice C	10 cycles 48 h	820,00 €	Included
ASTM A262 practice E	24 h	230,00 €	Included
ASTM A262 practice E	48 h	250,00 €	Included
ASTM A262 practice E	72 h	270,00 €	Included
ASTM A262 Practice F	120 h	300,00 €	Included
ASTM G28 method A	24 h	190,00 €	Included
ASTM G28 method A	120 h	300,00 €	Included
ASTM G28 method B	24 h	190,00 €	Included
ASTM G48 method A	24 h	190,00 €	Included
ASTM G48 method A	48 h	230,00 €	Included
ASTM G48 method A	72 h	240,00 €	Included
ASTM G48 method B	24 h	190,00 €	Included
ASTM G48 method B	48 h	230,00 €	Included
ASTM G48 method B	72 h	240,00 €	Included
ASTM A923 met.C	24 h	200,00 €	Included
ISO 3651.1	5 cycles 48 h	420,00 €	Included
ISO 3651.2 A method	20 h	230,00 €	Included
ISO 3651.2 Method B	20 h	236,00 €	Included

ISO 3651.2 method C	20 h	220,00 €	Included
Heat treatment for low carbon steels and stabilized		Euro 30,00 x lot up to 5 lots	

<b>TABLE 2 - MECHANICAL TESTS</b>				
<i>Essays with thickness &lt;10 mm</i>				
Test	Temperature	Cost [€] Processing + test		
		Carbon steel	Stainless steel	Nickel & special alloy
<b>Traction</b> (UNI-EN-ISO 68921; ASTM E8; ASTM A370)	Environment	52,00 €	64,00 €	80,00 €
<b>Fold</b> (UNI EN ISO 7438 5173-ASTM E290 - E190)	-	32,00 €	36,00 €	52,00 €
<b>Resilience (Terna)</b> (EN ISO 148.1-ASTM A370 / E23)	Environment	50,00 €	64,00 €	74,00 €
<b>Resilience (Terna)</b> (EN ISO 148.1-ASTM A370 / E23)	+ 19 ° ÷ -60 ° C	60,00 €	70,00 €	80,00 €
<b>Resilience (Terna)</b> (EN ISO 148.1-ASTM A370 / E23)	÷ 61 ° -196 ° C	64,00 €	74,00 €	84,00 €

<b>TAB.3 - MECHANICAL TESTS</b>				
<i>Essays with a thickness of 10 ÷ 40 mm</i>				
Test	Temperature	Cost [€] Processing + test		
		Carbon steel	Stainless steel	Nickel & special alloy
<b>Traction</b> (UNI-EN-ISO 68921; ASTM E8; ASTM A370)	Environment	56,00 €	68,00 €	84,00 €
<b>Fold</b> (UNI EN ISO 7438 5173-ASTM E290 - E190)	-	36,00 €	40,00 €	56,00 €
<b>Resilience (Terna)</b> (EN ISO 148.1-ASTM A370 / E23)	Environment	60,00 €	76,00 €	88,00 €

<b>Resilience (Terna)</b> (EN ISO 148.1-ASTM A370 / E23)	+ 19 ° ÷ -60 ° C	70,00 €	80,00 €	96,00 €
<b>Resilience (Terna)</b> EN ISO 148.1-ASTM A370 / E23)	-÷ 61 ° -196 ° C	74,00 €	84,00 €	100,00 €

**TAB.4 - MECHANICAL TESTS**

Essays with a thickness of 40 ÷ 80 mm

Test	Temperature	Cost [€] Processing + test		
		Carbon steel	Stainless steel	Nickel & special alloy
<b>Traction</b> (UNI-EN-ISO 68921; ASTM E8; ASTM A370)	Environment	68,00 €	80,00 €	100,00 €
<b>Fold</b> (UNI EN ISO 7438 5173-ASTM E290 - E190)	-	40,00 €	44,00 €	60,00 €
<b>Resilience (Terna)</b> (EN ISO 148.1-ASTM A370 / E23)	Environment	72,00 €	96,00 €	114,00 €
<b>Resilience (Terna)</b> (EN ISO 148.1-ASTM A370 / E23)	+ 19 ° ÷ -60 ° C	80,00 €	104,00 €	120,00 €
<b>Resilience (Terna)</b> (EN ISO 148.1-ASTM A370 / E23)	-÷ 61 ° -196 ° C	84,00 €	110,00 €	124,00 €

**TAB.5 - MECHANICAL TESTS**

Essays with a thickness > 80 mm

Test	Temperature	Cost [€] Processing + test		
		Carbon steel	Stainless steel	Nickel & special alloy
<b>Traction</b> (UNI-EN-ISO 68921; ASTM E8; ASTM A370)	Environment	80,00 €	100,00 €	120,00 €

<b>Fold</b> (UNI EN ISO 7438 5173-ASTM E290 - E190)	-	44,00 €	48,00 €	68,00 €
<b>Resilience (Terna)</b> (EN ISO 148.1-ASTM A370 / E23)	Environment	100,00 €	130,00 €	160,00 €
<b>Resilience (Terna)</b> (EN ISO 148.1-ASTM A370 / E23)	+ 19 ° ÷ -60 ° C	110,00 €	136,00 €	166,00 €
<b>Resilience (Terna)</b> (EN ISO 148.1-ASTM A370 / E23)	-÷ 61 ° -196 ° C	114,00 €	140,00 €	170,00 €

<b>TAB.6 - TESTS HARDNESS</b>				
	<b>Price [€]</b>			
<b>Test</b>	<b>To mark</b>	<b>Machining</b>		
		<b>Carbon steel</b>	<b>Stainless steel</b>	<b>Nickel &amp; special alloy</b>
<b>Rockwell hardness</b> (UNI-EN-ISO 6508.1; ASTM E18;) <b>Brinell Hardness</b> (UNI-EN-ISO 6506.1; ASTM E10, ASTM A370) <b>Vickers Hardness</b> (UNI-EN-ISO 6507.1; ASTM E384; UNI EN ISO 9015.1 /.2)	6,00 €	20,00 €	24,00 €	32,00 €

<b>Table 7 - METALLOGRAPHIC TESTS</b>			
<i>Preparing samples for assays with a thickness of 3 to 50 mm</i>			
<b>Test</b>	<b>Cost [€] Processing + test</b>		
	<b>Carbon steel</b>	<b>Stainless steel</b>	<b>Nickel &amp; special alloy</b>
<i>Macrographic examination</i>	110,00 €	120,00 €	140,00 €
<i>Micrographic examination</i>	90,00 €	100,00 €	110,00 €

**Table 8 - METALLOGRAPHIC TESTS**

*Preparing samples for assays with a thickness of <3 &> 50 mm*

Test	Cost [€] Processing + test		
	Carbon steel	Stainless steel	Nickel & special alloy
<i>Macrographic examination</i>	120,00 €	136,00 €	150,00 €
<i>Micrographic examination</i>	100,00 €	106,00 €	112,00 €

**Table 9 - EXAMS METALLOGRAPHIC**

Test	Price	Machining
<i>Count ferrite ASTM E562 (32 fields)</i>	360,00 €	SEE TAB. 7- 8
<i>Determinations of ASTM E45 met.A inclusions</i>	84,00 €	SEE TAB. 7- 8
<i>Determinations of ASTM E45 met.D inclusions</i>	230,00 €	SEE TAB. 7- 8
<i>Determination of Grain Austenitic ASTM E112 (austenitic steel)</i>	100,00 €	SEE TAB. 7- 8
<i>Determination of Grain Ferritic ASTM E112 ferritic steels</i>	100,00 €	SEE TAB. 7- 8
<i>Determination of Grain Austenitic carbon steel (KHON method)</i>	230,00 €	SEE TAB. 7- 8
<i>Determination of Grain Austenitic carbon steel (MC method QUAID-EHN)</i>	300,00 €	SEE TAB. 7- 8
<i>Determination of the corrosion depth</i>	100,00 €	SEE TAB. 7- 8
<i>Determination of intermetallic phases and / or carbides</i>	100,00 €	SEE TAB. 7- 8
<i>Counting of intermetallic phases and / or precipitates</i>	440,00 €	SEE TAB. 7- 8
<i>Micrographic analysis according to ASTM A923 met.A</i>	100,00 €	SEE TAB. 7- 8
<i>Photo subsequent to the first</i>	20,00 €	

<b>TAB.10- NDT</b>	
<i>Controls in place</i>	
<b>Test</b>	<b>Cost [€ / h]</b>
<i>Examination by means of ultrasound (search defects or thickness measurement) including equipment and consumables</i>	90,00 €
<i>Examination by means of penetrants including consumables</i>	90,00 €
<i>Examination using magnetic particles including equipment and consumables</i>	90,00 €
<b>Offsite Controls</b>	
<b>Test</b>	<b>Cost [€ / h]</b>
<i>Examination by means of ultrasound (search defects or thickness measurement) including equipment and consumables</i>	110,00 €
<i>Examination by means of penetrants including consumables</i>	110,00 €
<i>Examination using magnetic particles including equipment and consumables</i>	110,00 €
<b>ADDITIONAL COSTS :</b> <i>Personal Performance for travel hours 80.00 [ € / h] Transport costs 1.20 [ € / km] Travel expenses (nights, tolls, lunches etc.) cost</i>	

<b>Table 11 - NDT</b>	
<i>Controls in place</i>	
<b>Test</b>	<b>Price</b>
<i>Determination ferrite with portable instrument (a significant cost)</i>	5,00 €
<i>SMEs with portable instrument (Niton / Spectroport)</i>	120,00 €
<i>Determination roughness with portable instrument (a measuring cost)</i>	40,00 €
<b>Offsite Controls</b>	
<b>Test</b>	<b>Cost [€/h]</b>
<i>Determination ferrite with portable instrument</i>	160,00 €

<i>SMEs with portable instrument (Niton / Spectroport)</i>	160,00 €
<i>Determination roughness with portable instrument</i>	160,00 €
<b>ADDITIONAL COSTS:</b> Personal Performance for travel hours 80.00 [ € / h] Transport costs 1.20 [ € / km] Travel expenses (nights, tolls, lunches etc.) cost	

<b>Table 12 - HEAT TREATMENT</b>	
<b>DESCRIPTION OF TREATMENT</b>	<b>Price</b>
<i>Fixed fee for heat treatment (with the exception of the sensitization treatment of corrosion coupons)</i>	140,00 €
<i>Cost per hour of treatment</i>	12,00 €
<i>Heat treatment cost awareness of corrosion coupons</i>	60,00 €
<i>Treatment Cost Step Cooling API RP 934 (240h)</i>	1.900,00 €
<b>Tab.13 - CHEMICAL ANALYSIS quantometric</b>	
<b>DESCRIPTION OF TREATMENT</b>	<b>Price</b>
<i>Carbon steel</i>	170,00 €
<i>Stainless Steel</i>	190,00 €
<i>Nickel &amp; special alloy</i>	190,00 €
<b>CERTIFICATION</b>	
Certificate / report (up to two pages)	16,00 €
Successive Test reports (more than two pages)	10,00 €
Duplicate / Reprints	10,00 €/each
Heat Treatment Diagrams	16,00 €/each