

# Price List

## Chemical analysis :

- carbon, low alloy and stainless steels (no preparation required) 17 elements reported ( C, Mn, P, S, Si, Ni, Mo, Cr, Cu, Al, V, Ti, Nb, B, Co, W, Sn) **60.00**
- additional elements by OES each **5.00**
- aluminum, nickel , copper and cobalt alloys ( elements reported as required per specification where possible) **85.00**
- Carbon by LECO , millings ( min. charge 50.00) **15.00**
- sample preparation : cutting , melting ect. **30.00**
- single element OES ( 5.00 each, min. 35.00 per sample) **35.00**
- nitrogen or oxygen by LECO **55.00**
- hydrogen by LECO Titanium **205.00**
- hydrogen by LECO **95.00**
- “wet” analysis (DCP) **POR**

## Physical testing :

- tensile test carbon and low alloy (less than 20 min. cutting time) **45.00**
- tensile test super alloys (Fe, Ni-Co base) **105.00**
- Charpy’s impact test (low alloy) **85.00**
- sub size charge (less than 10 x 10 mm) **15.00**
- Charpy’s impact test – austenitic (low to non-magnetic) **125.00**
- guided bend test (each) **35.00**
- specimen etch for weld line/HAZ **20.00**
- Hardness Testing Brinell/Rockwell (**50.00 minimum per report**) **15.00**
- 4-Quad Hardness Testing **60.00**

## Metallurgical testing :

- microexamination ( grain size, microstructure ect. ) **95.00**
- grain size E112 by A 3.2.1.4 Oxidation procedure (martensitic steels) **115.00**
- E562 manual point count **140.00**
- E45 microcleanness Method A, B or C (includes preparation) **125.00**
- E45 microcleanness Method D (includes preparation) **175.00**
- ASTM A262
- practice A (oxalic acid test) **95.00**
- practice B (ferric sulfite - sulfuric acid test - 120 h) **250.00**
- practice C (nitric acid test - 240 h) **340.00**
- practice D (nitric - hydrofluoric acid test - 4 h) **450.00**
- practice E (copper - copper sulfite - sulfuric acid test - 24 h) **125.00**
- sensitizing HT at 1250°F-1 hour (low carbon and stabilized grades) **50.00**
- ASTM G48A (ferric chloride solution 22-50°C - 24h) **75.00**
- ASTM A923C (ferric chloride solution 22-50°C - 24h) **75.00**
- ASTM G28A:
- 24 hours ferric sulfate - sulfuric acid boiling solution test (Hastelloy C, C276, Inc. 600) **205.00**
- 120 hours ferric sulfate - sulfuric acid boiling solution test (other Ni-alloys) **375.00**
- ASTM G28 B: 24 hr Acid-oxidation test. **285.00**

## On site testing:

- PMI by ED XRF @**300.00 minimum first hour/150.00 after + travel 50.00/hour**
- PMI by OES @**500.00 minimum first hour/250.00 after + travel 50.00/hour**
- hardness test **15.00 per test (50.00 minimum)**
- clerical for PMI reporting @ **25.00 per hour**
- Liquid Penetrant Testing @ **150.00 callout 75.00 per hour**

## Other services:

- Heat Treatment **25.00/hour in furnace time+50.00 set up charge**
- Failure analysis
- Liquid Penetrant Testing in house @ **75.00 per hour**