

## Tensile tests of Inconel.

Task reference: 114-33598

Force Technology  
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### Subject:

To perform tensile tests on two qualities of tensile bars.

### Samples

3 pcs. Printed.  
 3 pcs. Reference.



### Applied methods

Tensile speed 5mm/min.  
 GL = 12,5 mm.  
 Youngs modulus measured between 50 MPa and 200 MPa.

### Equipment

Force S00083.  
 Extension S00090.  
 Diameter S00017

### Results

| Type      | Max stress | Modulus | Elongation at Max. | 0,2% Yield |
|-----------|------------|---------|--------------------|------------|
|           | Mpa        | Mpa     | A 30 %             | Mpa        |
| Printed   | 669        | 215000  | 48                 | 286        |
| Reference | 684        | 195000  | 52                 | 286        |

Se detailed results and curves at page 2.

Test setup at page 3

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 Test engineer, Centre of Test Excellence

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**Number of pages:** 3

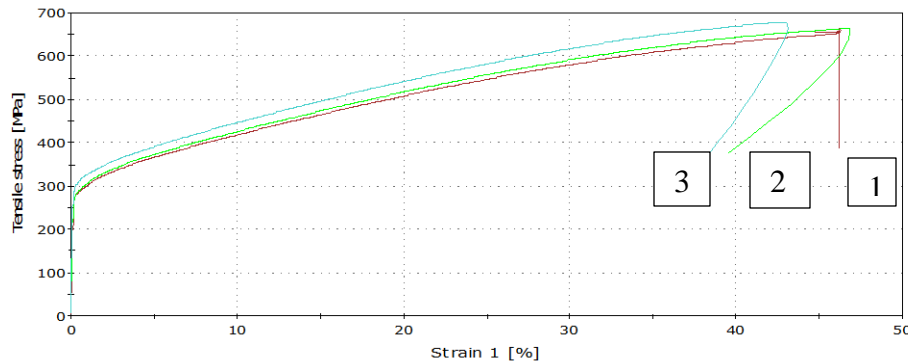
**Report no.:** 213949-1

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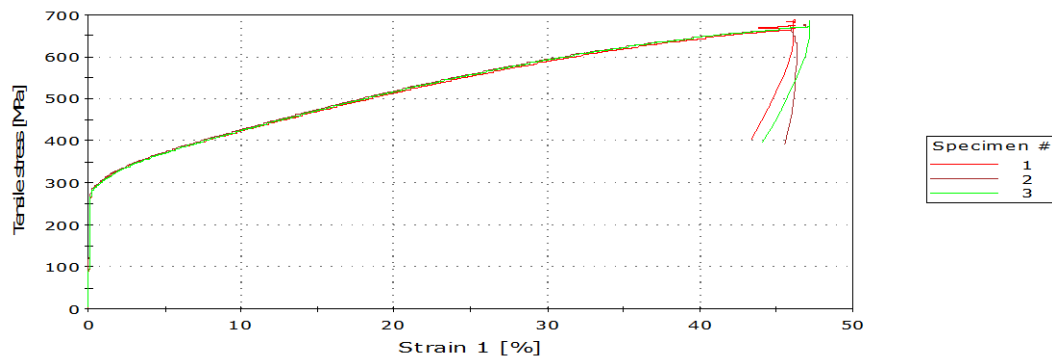
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Printed



| Printed        |                |                |                           |                |
|----------------|----------------|----------------|---------------------------|----------------|
| Sample No.     | Max stress Mpa | Modulus Mpa    | Elongation at Max. A 30 % | 0,2% Yield Mpa |
| 1              | 664            | 200000         | 50                        | 279            |
| 2              | 666            | 180000         | 49                        | 281            |
| 3              | 677            | 265000         | 47                        | 297            |
| <b>Average</b> | <b>669</b>     | <b>215.000</b> | <b>48</b>                 | <b>285,5</b>   |
| STD.DEV        | 7              | 44441          | 1                         | 10,0           |
| VAR. COEF %    | 1              | 21             | 3                         | 3,5            |

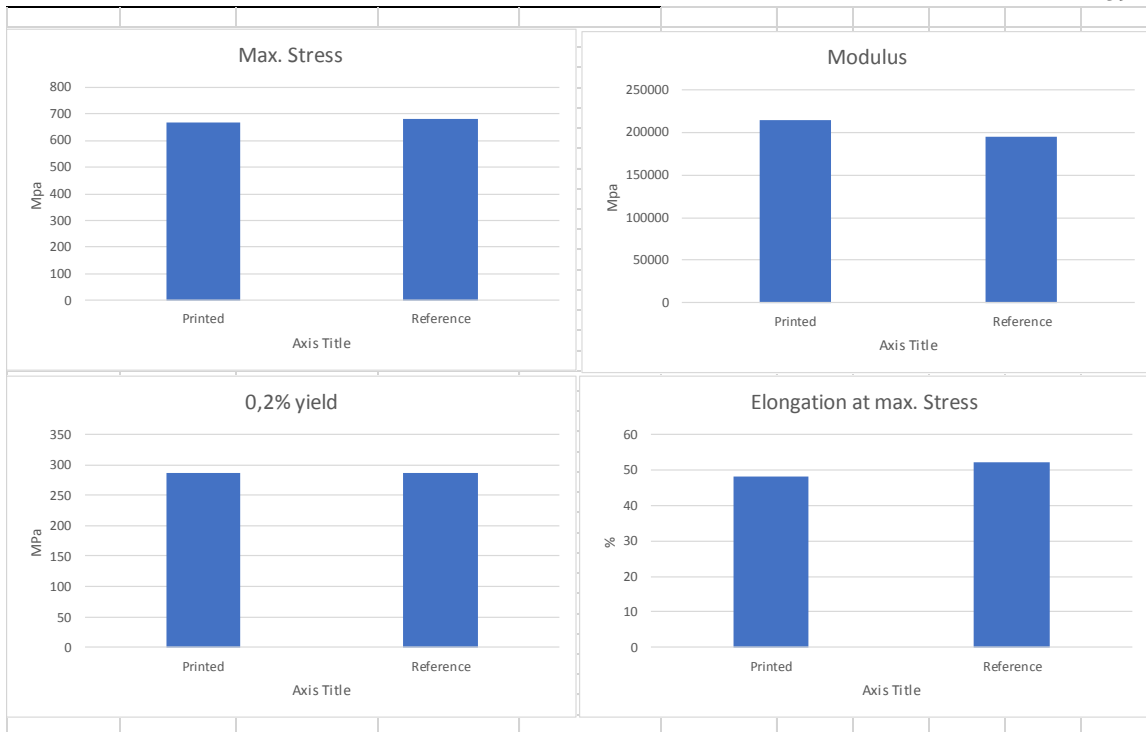
Reference



| Reference      |                |                |                           |                |
|----------------|----------------|----------------|---------------------------|----------------|
| Sample No.     | Max stress Mpa | Modulus Mpa    | Elongation at Max. A 30 % | 0,2% Yield Mpa |
| 1              | 688            | 205000         | 55                        | 286            |
| 2              | 677            | 195000         | 48                        | 287            |
| 3              | 687            | 185000         | 52                        | 285            |
| <b>Average</b> | <b>684</b>     | <b>195.000</b> | <b>52</b>                 | <b>286,2</b>   |
| STD.DEV        | 6              | 10000          | 4                         | 0,8            |
| VAR. COEF %    | 1              | 5              | 7                         | 0,3            |

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