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|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------|---------------|
| <br><small>A JOULON COMPANY</small> | <b>SARA SAE ENGINEERING SPECIFICATION</b> |                    |               |
|                                                                                                                      | <b>Section: SES 26 – 817</b>              |                    |               |
|                                                                                                                      | <b>Issue:</b> “A”                         | <b>Rev No:</b> “0” |               |
|                                                                                                                      | <b>Eff. Date:</b> 31-03-2017              | <b>Page:</b>       | <b>1 of 3</b> |

**NICKEL BASE ALLOY INCONEL 625 FOR RING GASKETS  
(HARDNESS 83 HRB MAX.)**

| Rev | Reason of Change | Date       | Made By | Reviewed By | Approved By | Status   |
|-----|------------------|------------|---------|-------------|-------------|----------|
| 0   | Initial release  | 31-03-2017 | MN      | AS          | KKD         | Released |

|                                                                                                                     |                                           |                     |
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## 1.0 SCOPE

- 1.1 This specification covers compression type seals such as ring gaskets, which require corrosion resistance to H<sub>2</sub>S, CO<sub>2</sub> and Cl.

## 2.0 APPLICABLE SPECIFICATIONS

- 2.1 Ni-Cr-Mo Alloy UNS N06625

## 3.0 CHEMICAL COMPOSITION

- 3.1 The chemistry shall be as follows:

|                            |              |
|----------------------------|--------------|
| Chromium.....              | 20.0 - 23.0% |
| Iron, max .....            | 5.0%         |
| Molybdenum.....            | 8.0 - 10.0%  |
| Columbium & Tantalum ..... | 3.15 - 4.15% |
| Carbon, max.....           | 0.10%        |
| Manganese.....             | 0.50%        |
| Silicon, max .....         | 0.50%        |
| Phosphorus, max.....       | 0.015%       |
| Sulfur, max .....          | 0.015%       |
| Aluminum, max.....         | 0.40%        |
| Titanium, max.....         | 0.40%        |
| Cobalt, max1 .....         | .0%*         |
| Nickel .....               | Balance      |

\* Not required for routine inspection.

|                                                                                   |                                           |                     |
|-----------------------------------------------------------------------------------|-------------------------------------------|---------------------|
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## 4.0 MECHANICAL PROPERTIES

4.1 Ring gasket material shall be of hardness specified below:

Brinell Hardness, max .....160 BHN

Rockwell Hardness, max ..... 83 HRB

## 5.0 HEAT TREATMENT

5.1 Option I (Hot Formed)

5.1.1 Heat to 1700°-2125°F for up to one hour.

5.1.2 Air cool.

5.2 Option II (Solution Annealed)

5.2.1 Heat to 2000°-2200°F for up to one hour.

5.2.2 Air cool or water quench.