

|                       |                 |
|-----------------------|-----------------|
| Quality               | 4320            |
| According to Standard | ASTM A 29/A 29M |
| Number                | -               |



|                      |    |      |        |     |
|----------------------|----|------|--------|-----|
| Comparable Standards | EN | W.N. | BS 970 | DIN |
|----------------------|----|------|--------|-----|

|  |   |   |   |   |
|--|---|---|---|---|
|  | - | - | - | - |
|--|---|---|---|---|

|                   |             |             |             |             |             |             |            |
|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| Chemical Analysis | C %         | Mn %        | Si %        | Cr %        | Ni %        | Mo %        | S%         |
|                   | 0.17 - 0.22 | 0.45 - 0.65 | 0.15 - 0.35 | 0.40 - 0.60 | 1.65 - 2.00 | 0.20 - 0.30 | 0.040 max. |
|                   | P %         |             |             |             |             |             |            |
|                   | 0.035 max.  |             |             |             |             |             |            |

**Hot Work and Heat Treatment Temperatures**

| Preheat Treatment °F (°C) | Austenitizing Temperature, °F (°C) |                                | Austenitizing Time (minutes) | Quench Medium | Tempering Temperature, °F (°C) | Minimum Hardness, RC |
|---------------------------|------------------------------------|--------------------------------|------------------------------|---------------|--------------------------------|----------------------|
|                           | Salt Bath                          | Controlled Atmosphere Furnaces |                              |               |                                |                      |
| -                         | -                                  | -                              | -                            | -             | -                              | -                    |

**Mechanical Properties at Room Temperature**

| Condition | Ø mm. | Rp0,2 min. N/mm2 | Rm N/mm2 | A min. % | KV min. J | Max. Brinell Hardness |                |
|-----------|-------|------------------|----------|----------|-----------|-----------------------|----------------|
|           |       |                  |          |          |           | Annealed BHN          | Cold Drawn BHN |
|           | -     | -                | -        | -        | -         | -                     | -              |