



**BROCKHOUSE SPECIAL PRODUCTS**

A Division of Brockhouse Forgings Limited.

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Customer Ferretera Anahuac SA De CV

Order No. 93/43

Our Order No. S0/00244

Date 29.01.96

Certificate No.  
**B.S.P.C/ 0034**

Inspection Certificate  
DIN 50049/  
3.1:B

| Cast No. | Quantity | Description                | Test No. | Mechanical Properties                               |   |                        |                                    |                               | Hardness<br>BH.N. |
|----------|----------|----------------------------|----------|---|---|------------------------|------------------------------------|-------------------------------|-------------------|
|          |          |                            |          | Yield Stress<br>Nmm <sup>2</sup> / R <sub>0.2</sub> | Tensile Strength<br>Nmm <sup>2</sup> / R <sub>m</sub> | Reduction of Area<br>% | Elongation of Area<br>LO = 5D<br>% | Impact Strength<br>Notch Temp |                   |
| C885     | 100      | 2" 300lb R/F Blind         | 41419    | 335.87  | 540.64  | 57.36                  | 30.00                              |                               | 159               |
| C677     | 100      | ¾" 300lb R/F Weld Neck Std | 41419    | 348.23  | 534.46  | 57.85                  | 28.28                              |                               | 156               |
| B793     | 500      | 1¼" 150lb R/F Slip-On      | 41407    | 58.10   | 39.78   | 67.85                  | 27.20                              |                               | 159               |

| Cast No. | Chemical Analysis |      |      |      |      |      |      |      |        |       |        |      |   | Material Specification | Long Form  | Sh |    |
|----------|-------------------|------|------|------|------|------|------|------|--------|-------|--------|------|---|------------------------|------------|----|----|
|          | C %               | Si % | Mn % | P %  | S %  | Cr % | Mo % | Ni % | Al %   | Nb %  | V %    | Cu % | % |                        |            |    | %  |
| C886     | .25               | .218 | .771 | .015 | .015 | .111 | .014 | .075 | XXXXXX | .005  | XXXXXX | .261 |   |                        | ASTM       |    | .3 |
| C677     | .229              | .195 | .744 | .023 | .020 | .167 | .022 | .079 | XXXXXX | .005  | XXXXXX | .221 |   |                        | A105       |    | .3 |
| B793     | .255              | .213 | .803 | .019 | .019 | .16  | .003 | .10  | XXXXXX | .0012 | XXXXXX | .11  |   |                        | Normalised |    |    |

All items will be stamped with our mark.

B.S.P.

Manufacturing requirements are satisfied  
Dimensional and surface requirements are satisfactory

For and on behalf of  
Brockhouse Special Products

95/43