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| **STUB AXLES** | **Worksheet: SX1** | | | **Element: Front stub axle** | **Process: Manufacturing** |
| **MATERIAL** | | **TOOLS** | **PROTECTIVE ELEMENTS** | **OPERATIONS** | **FINAL SCORE** |
| Square tube 35 x 35 mm | | http://recursos.ort.edu.ar/static/archivos/image/262113/18971Resultado de imagen de sierra de cinta para metal |  | 1º. Cut the square tube to 70 mm outer length.  2º. Deburring. | Piece A X 1 unit. |
| Piece A X 1 unit. | | http://www.ferreteriasoler.com/image/cache/data/BAG-115-RADIAL-500x500.JPG |  | 3º. Cut into round one end of the piece | Piece B X 2 unit. |
| **MATERIAL** | | **TOOLS** | **PROTECTIVE ELEMENTS** | **OPERATIONS** | **FINAL SCORE** |
| Square tube 35 x 35 mm | | http://www.varo.com/data/getimage.ashx?path=/Upload/Images/ImgGallery/Custom/POW302/POW302a.jpg&height=1000&width=1000 |  | 4º. Drill two hole 8 mm diameter. | Piece C X 2 unit. |
| Plate 30 mm. | | http://www.varo.com/data/getimage.ashx?path=/Upload/Images/ImgGallery/Custom/POW302/POW302a.jpg&height=1000&width=1000http://recursos.ort.edu.ar/static/archivos/image/262113/18971Resultado de imagen de sierra de cinta para metal |  | 5º. Cut the plate to 134 mm outer length.  6º. Deburring.  7º. Drill a hole 8 mm diameter. | Piece D X 2 unit. |
| **MATERIAL** | | **TOOLS** | **PROTECTIVE ELEMENTS** | **OPERATIONS** | **FINAL SCORE** |
| Piece D X 2 unit. Piece C X 2 unit. | | http://www.bo.all.biz/img/bo/catalog/7359.jpeg |  | 8º. Weld the two pieces. | Piece E X 2 unit. |
| Round bar of 20mm diameter | | http://recursos.ort.edu.ar/static/archivos/image/262113/18971Resultado de imagen de sierra de cinta para metal |  | 9º. Cut the round bar to 132 mm outer length.  10º. Deburring. | Piece F X 4 unit. |
| **MATERIAL** | | **TOOLS** | **PROTECTIVE ELEMENTS** | **OPERATIONS** | **FINAL SCORE** |
| Piece F X 4 unit. | | http://www.varo.com/data/getimage.ashx?path=/Upload/Images/ImgGallery/Custom/POW302/POW302a.jpg&height=1000&width=1000http://www.ferrimaco.cl/assets/uploads/productos/2cbc4-Porta-Machos.jpghttp://img.directindustry.es/images_di/photo-g/84327-3324967.jpg |  | 11º. Drill a trough hole 6,75 mm diameter and 20 mm length.  12º. Thread manufacture M8 x 20mm | Piece G X 4 unit. |
| Piece G X 4 unit. Washer 20 mm diameter x 4 unit. | | http://www.bo.all.biz/img/bo/catalog/7359.jpeg |  | 13º. Weld the two pieces. | Piece H X 4 unit. |
| **MATERIAL** | | **TOOLS** | **PROTECTIVE ELEMENTS** | **OPERATIONS** | **FINAL SCORE** |
| Piece H X 1 unit. Piece E X 1 unit. | | http://www.bo.all.biz/img/bo/catalog/7359.jpeg |  | 14º. Weld the two pieces. | Piece J X 1 unit. (Right) |
| Piece H X 1 unit. Piece E X 1 unit. | | http://www.bo.all.biz/img/bo/catalog/7359.jpeg |  | 15º. Weld the two pieces. | Piece K X 1 unit. (Left) |