MAS500 AR Abrasion Resistant Steel (500 Brinell)

1.High Strength Low Alloy Steel

Abrasion Resistant Steel

MAS300 AR | MAS400 AR | MAS450 AR | MAS500 AR

2.MAS500 AR – Our's designation for 500 brinell hardness abrasion resistant steel. MAS500 AR is a 500 brinell grade steel which is ideal for heavy wear applications commonly found in the mining and earth moving industry.

3.The material has excellent tensile strength and hardness, infact MAS500 AR has 3 times the hardness of S355 structural steel. The steel has a martensitic micro-structure and whilst heat treatment is not an option (since this would reduce the materials strength and abrasive qualities), MAS500 AR is easy to weld using conventional methods and has good formability.

4.The material is referred to as a 500 brinell hardness steel – the actual hardness range values for this grade relating to thickness are listed below:

|  |  |  |  |
| --- | --- | --- | --- |
| Grade | Product | Thickness (mm) | Hardness Range (HBW) |
| MAS500 AR | Cut Lengths | 4.0 – 5.5 | 450 – 540 |
| MAS500 AR | Heavy Plates | 5 – 60 | 450 – 540 |

We can supply MAS500 AR from stock for distribution to our clients worldwide. Please refer to the chemical and mechanical properties below:

5.Chemical Composition

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Grade | C | Si | Mn | P | S | Cr | Ni | Mo | B |
| MAS500 AR | 0.30 | 0.7 | 1.70 | 0.025 | 0.015 | 1.00 | 0.70 | 0.5 | 0.005 |

Content % max unless otherwise stated. Aluminium and can titanium additionally used as a micro-alloy material.

6.Mechanical Properties

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Grade | Yield StrengthMPa | Tensile StrengthMPa | ElongationA | Impact StrengthCharpy V 20 J |
| MAS500 AR | 1250 | 1450 | 8 | -30°C |

Typical values based on 20mm plate thickness

(Please note: the technical information above is for guidance only – for exact specifications please check with our Sales Team)

7.For information about MAS500 AR abrasion resistant steel or to receive a competitive and detailed quotation please contact us.