

10 Reasons You Should Buy Arcelor Mittal Bars over Other Big Steel Producers

ArcelorMittal is the leading and largest steel manufacturer in the world. ArcelorMittal produces and distributes on five continents in excess of 1200 lakh tons of steel annually through its 335,000 employees with presence in over 60 countries. It's name needs no introduction in India Superior Quality and Production Processes are the hallmarks of Arcelor Mittal rebars.

All codes and standards specify minimum and/or maximum values which all plants have to meet, Arcelor Mittal rebars go way beyond the minimum requirements of the code and meet the leading quality requirement of buyers around the globe.

Why Arcelor Mittal Steel is superior to other Steel Producers can be classified in the following categories

- 1) Chemical Properties
- 2) Physical Properties
- 3) Processes
- 4) Commercial Terms

A) Chemical Properties

1) Lower Sulfur and Phosphorous Values

Sulfur (S) and Phosphorous (P) are impurities in steel rebars. They are removed from steel with advanced refining techniques. Lower the values, higher the quality of steel. Indian Big Steel Producers typically have a standard of 0.045 max for each of the two elements. Arcelor Mittal has lower values of S and P compared to other Big Steel Producers.

Arcelor Mittal Rebars also have a total S+P content far below 0.075 which is specified as a requirement for 500 Ductile grade material in Indian IS1786:2008 codes.

2) Lower Nitrogen Values

IS1786:2008 specifies a maximum value of 0.012 percent for Nitrogen. Nitrogen induces strain aging, blue brittleness and other adverse effects on steel.

Arcelor Mittal tests Nitrogen for every Heat and keeps it within specified limit due to its advanced processes. They also mention it on all test certificates.

Indian Steel Producers do not mention Nitrogen content on the test certificates and their test practices for this important element are unknown.

B) Physical Properties

3) Change of Properties after Manufacturing

Indian Rebar Producers make 8mm, 10mm, 12mm in coils. To make the coils they have to keep the strength on the lower side so that the coils are wound on the reels. Then these coils are straightened either in the plant or mostly at small processors. This cold working operation induces change in strength. Also due to the straightening operations ribs get flattened at a lot of places leading to changes in cross section area. Straightness is also not uniform.

This is the reason that many times the smaller sizes often fail to clear the tensile tests. For these reasons many times the small sizes are outsourced to conversion agents(which creates its own problems).

4) Fatigue Properties

In reinforcing steels, fatigue properties are governed primarily by the stress concentration developed at the root of the ribs and any bar failures normally initiate from such points. As such this is more a function of the care exercised by the manufacturer in producing the ribs. Any excessive rib damage resulting from bending or de-coiling can create a problem with respect to fatigue.

The test requirement for fatigue is to survive 5 million stress cycles, at stress conditions that depend on the size of the bar.

Cutting and Proper Design of Ribs is also essential for bond properties of steel with concrete. Arcelor Mittal rebars have uniformly designed ribs which ensure uniform and strong bond with concrete and also excellent fatigue strength.

C) Process

5) Superior Product Manufacturing Technology, People and Processes

Superior product quality requires not only good plants but also good people and good processes.

Arcelor Mittal rebars are produced using iron ore and coal from their own captive mines through the primary steel making route. Molten Steel undergoes superior refining processes to ensure consistent properties in the rebar.

A lot of money and resources is invested every year in research and development to provide customers with superior quality products.

Because Quality Outcomes depend on the quality of People, ArcelorMittal always seeks to attract and nurture the best people.

All plants have not only all the process certifications such as ISO 9001:2008 and OHSAS but also they have appointed third party inspection for their processes and products in manufacture of rebars

6) UKCARES Approval

In text books on construction, it is always mentioned that since rebars are manufactured in factory setting more stress should be put on concrete on site rather than rebars. But the many failures of steel on site make the quality claims of many steel manufacturers hollow.

In India, though everybody claims good quality one does not know the true state of affairs at the plant level. One only has to rely on testing which is done after material reaches on site. And by the time the material test results come, usually the material is consumed.

Arcelor Mittal plants are approved by third party agency CARES.

CARES is an independent, not-for-profit certification body, established in 1983 to provide confidence to the users, purchasers and detailers of constructional steels through a regime of regulation, testing and inspection. It operates for the benefit of the construction industry offering certification schemes for companies that produce materials, components or offer services, primarily to the reinforced concrete industry. Clients can specify CARES approved companies and products with confidence that they will comply with the relevant product or system standards and without the need for verification testing by the purchaser or contractor.

Certification by CARES can be used by manufacturers in support of CE marking. CARES is an international operator, providing certification in over 40 countries worldwide. In order to provide product users with the confidence that their products arrive at the construction site as specified, CARES certifies firms at all levels through the supply chain, from the production of hot metal through processing and stocking and distribution. CARES endeavors to ensure that its certification is required by major companies operating in the construction supply chain in the UK, Europe, Middle East and the Far East in particular.

Further details about cares can be had from www.ukcares.co.uk

7) Mill Marking

Arcelor Mittal material is marked with the AM logo at regular intervals.



D) Commercial Terms

8) Regular Availability

In India the Big Steel Plants have very limited capacity to fulfill the requirements of the growth India is experiencing. After catering to the Government Sector and Defense which are given priority, very little material is left for the others. As a consequence there is a constant shortage of some or all sizes. Whatever material is left is garnered by traders who sell way above listed prices.

Some plants appoint conversion agents of some local rolling mills. Conversion agents do not have the basic requisites for making good quality bars. A lot of spurious material also enters the supply chain from such mills.

If you can plan your purchases in advance, we can insure regular availability of material from Arcelor Mittal

9) Prices

ArcelorMittal is competitively priced as compared to other Big Steel Plants.

10) Packing

Arcelor Mittal rebars are packed in 2MT ton bundles for ease of handling.

11) Length

Bars are available in standard length of 12 metres.

For further details kindly contact

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