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## **Molybdenum alloying in advanced special steels: small amounts, big effects enhancing strength and sustainability**

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The addition of molybdenum as an alloying element is critical for optimizing the performance of special steels in various demanding applications, including tooling, plastic molding, armor, abrasion resistance, pressure vessels and offshore industries. Molybdenum is commonly added to special steels to improve their strength, hardness, toughness, and wear resistance. In this presentation, we will explore some examples of modern special steels plates produced by ArcelorMittal Industeel and their applications, with special emphasis on the importance of molybdenum to their key properties. The small but critical addition of molybdenum to the steel composition allows manufacturers to produce stronger and more durable products, fully recyclable, without excessive use the resources. Across various sectors including construction, machinery, energy, and defense, the advantages of light weighting, corrosion resistance, longer lifetime contribute to a more sustainable future and reduce the environmental impact.

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