

Specified minimum, actual MTC result and design allowable stress are different numbers

Steel Properties: Strength, Hardness & Toughness

Value type	Example	Source	What it means
Specified minimum	$YS \geq 240 \text{ MPa} / TS \geq 415 \text{ MPa}$	Product specification	Product acceptance threshold
Actual MTC result	$YS = 285 \text{ MPa} / TS = 465 \text{ MPa}$	Illustrative heat test result	The tested heat exceeded the minimum; it does not create a new grade
Design allowable stress	$137.9 \text{ MPa @ } 38 \text{ }^{\circ}\text{C}$	Illustrative B31.3-based material table	Code design input that changes with temperature

Source / basis: <https://niktrd.com/mechanical-properties>