

CA Line Specs

MATERIAL: COLD-ROLLED FULL HARD STEEL STRIP	Width: 610 to 1,219 mm (24" to 48")	Thickness: 0.50 to 2.29 mm (0.02" to 0.09")	Processing capacity: 109,000 mt/year (120,000 USt/year)	Effective production time: 6,400 h/year	Throughput capacity: max. 18.2 mt/h (20.1 USt/h)
HEATING CHAMBER TEMPERATURE	Hydrogen atmosphere: more uniform heat dissipation	Heating section: max. 980°C (1,796°F)	Transformation section: max. 550°C (1,022°F)	155 single end recuperative radiant tubes	Strip exit temperature: <82°C (180°F)
H2 QUENCH	Hydrogen quenching results in on spec, residual stress-free prime yield and dead flat material	Dial in precise cooling across the entire strip profile, width and length	Can totally control the cooling process and engineer the strip to exact properties	No water is used for quenching, eliminating shape problems and post CAL processing that induces stress	Hydrogen quench results in cleaner strip with more precise properties across the entire strip.
MICROSTRUCTURAL TARGETS	Up to 100% martensite	Dual Phases – with varying volume fraction of ferrite and martensite	TRIP's and Complex phase – with varying volume fraction of martensite, bainite, retained austenite, & ferrite		
Q & P—FERRITE MATRIX, TEMPERED MARTENSITE, RETAINED AUSTENITE	Quench Section provides quenching flexibility	Unique quench patterns possible to meet complex AHSS/ UHSS and next generation AHSS	Slow Cooling Zone after the furnace	Jet Cooler offers infinitely variable cooling rates	Quench can be interrupted for tailored microstructure [e.g. stop at bainite nose for QP steel or for partially transforming to martensite & retain austenite]
OVERAGING OR TRANSFORMATION ZONE	Can reheat the strip up to 1,022° F or not be utilized at all depending on target properties	Examples: • 1,500 M cycle developed for the furnace does not utilize any heat in the overaging zone	• 980 DP cycle developed for the furnace utilizes an overaging zone temperature of 824° F for 60 seconds	There is little microstructural change in the overaging zone, only tempering and diffusion	