

The same API 5L grade can be supplied by different manufacturing methods

API 5L line-pipe grades: A25 to X80

Route	Definition	Engineering effect	Technical control
SMLS	Seamless	No longitudinal seam; circumferential properties and dimensions still require verification.	Final process, heat treatment and NDE
HFW	High-frequency welded	Weld-line and HAZ quality depend on input, heat control and oxide removal.	Seam testing, hardness and toughness
SAWL	Longitudinal SAW	Used for large diameter; plate forming and longitudinal-seam quality are critical.	Mother plate, seam NDE and repair policy
SAWH	Helical SAW	Diameter flexibility from coil; seam angle and geometry require control.	Mother coil, seam tracking and end forming

Source / basis: <https://niktrd.com/api-line-pipe-grades>