C&N is a professional pipe fittings & flange manufacturer .
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ASTM A694 F65 Flange
A694 F52/ F60/ F65 Slip On Flange
A694 F52/ F60/ F65 Weld Neck
A694 F52/ F60/ F65 Blind Flanges

ASTM A694 F65

ASTM A694 Grade F65 is a low alloy steel, usually supplied in the Quench and Tempered condition.
It is typified by having moderate strength and impact toughness and is used extensively for the manufacture of flanges and fittings

Typical Chemical composition

Carbon Equivalent = C + Mn/6 + (Cr+Mo+V)/5 + Cu+Ni)/15 Pcm = C + Si/30 + (Mn+Cu+Cr)/20 + Ni/60 + Mo/15 + V10 + 5B	Carbon	0.10 - 0.14%
	Silicon	0.15 – 0.25%
	Manganese	1.25 – 1.40%
	Phosphorous	<0.025%
	Sulphur	<0.003%
	Chromium	0.15%
	Molybdenum	0.15 – 0.20%
	Copper	<0.20%
	Aluminium	0.015 – 0.025%
	Titanium	<0.05%
	Vanadium	0.05 – 0.07%
	Boron	<0.0005%
	Nitrogen	<0.015%
	Carbon Equivalent	<0.43%
	Pcm	<0.24

Mechanical Property Requirements

Tensile Strength Mpa	Yield (0.2%) MpA	Elongation %	Reduction of Area %	Charpy J -46°C	Hardness HB
>530 (>77KSi)	>450 (65KSi)	>20	>45	>45	152 - 235HB

Forging

Forging Temperature for this material should be 900 – 1200°C
Soak times should be kept to a minimum to avoid heavy scaling, but sufficient time should be given to allow centre to achieve furnace temperature.
After forging pieces should be allowed to cool in still air.

Heat Treatment

Normalising – Heat to 890 - 960°C for a time commensurate with ruling section, Air cool (If Required)

Hardening – Heat to 890 – 960°C for a time commensurate with ruling section and quench in Water.

Tempering – Re-heat to 540-650°C. Hold for a time commensurate with the ruling section and cool in still in air.