

# Quality Open Die & Rolled Ring Forgings for the Nuclear Industry

Patriot Forge is a highly trusted and respected supplier to the nuclear power industry throughout North America. We supply components to manufacturers of Fittings, Valves, Pumps, Fuel Handling & Fuel Storage Systems. Patriot is also a major supplier of nuclear quality barstock to North America's Steel Service Centers.

As a cornerstone of our business, we have committed substantial resources to ensure complete customer satisfaction:

## RAW MATERIAL

We maintain an extensive raw material inventory from domestic sources and with chemistries designed to meet all ASME code years. (See reverse...)

## QUALITY PROGRAM

Patriot's quality program has been audited and approved by many of the industries leading manufacturers. All of our forging and heat treat practices are designed and overseen by a dedicated team of on-staff metallurgists.

## CAPABILITIES

Utilizing precision hammer, hydraulic press and seamless ring rolling technologies, Patriot can produce forgings from 5 to 35,000 lbs. We also offer a full spectrum of machining configurations from traditional to CNC.

## Non-Destructive Testing

Patriot maintains complete in-house non-destructive testing facilities. Our team of NDE technicians are well experienced and fully qualified according to ASNT-TC-1A (Level I, II & III) and the Canadian General Standards Board (Level I & II)

- Ultrasonic Inspection
- Liquid Penetrant
- Magnetic Particle

## Destructive Testing

Patriot offers a full range of destructive testing. Test results are confirmed immediately through a direct live computer link to our independent testing laboratory.

- Impacts
- F.A.T.T.
- Tensile
- Hot Tensile
- Stress Rupture
- Macrostructure
- Product Analysis
- Metallurgical Evaluation



## NUCLEAR INDUSTRY MATERIALS

ASME GRADES			STAINLESS & HIGH TEMPERATURE ALLOYS		
SA182					
F1	F304	SA 105	303	347	XM32 (JETHETE)
F5	F304H	SA 266 CL 1 - 4	304	347H	17-4PH
F6,	F304L	SA 350-LF2	304H	403	15-5PH VAR & ESR
F6NM	F309H	SA 638 GR. 660	304L	405	13-8-MO (XM-13)
F6A	F310	SA 705 XM16	309	410	13-4
F9	F316	SA 479 XM11, XM19	310	410 LOW CO.	AM 455 (CUSTOM 455)
F11	F316H	SA 565 XM32, 616	316	410 VAR	A286 (A638 TYPE 660)
F22	F316L	SA 564 GR 630, XM12, XM13	316H	416	ALLOY 20 (CARPENTER 20)
F51	F321	XM16, XM19	316L	420	NITRONIC 50, NITRONIC 60
F55	F347		316L LOW CO.	422	MONEL 400, K500
F91			317L	422 ESR	INCONEL 600, 625, 625 PLUS, 718, 750, 800 / H, 825

## BALANCE OF OUR ACTIVE INVENTORY

AIRCRAFT / MILITARY	LOW ALLOY	CARBON	TOOL STEELS & SPECIALTY ALLOYS
MIL 24093	A668	1018	D2, A2, H13, S-7, W1, M2
MIL 23284	3310/12	1020	ELECTRICAL IRON
MIL 23009	4130	1022	6061F ALUMINUM
MIL 6758	4140/4140 VAR	1030	2014 ALUMINUM
MIL 5626	4145	1035	2025 ALUMINUM
MIL 8844	4150/4150RESUL	1040	300M
MIL 860	4320	1045	C26
MIL 890	4330/4330V/4330NV	1055	6AL-4V TITANIUM
MIL 5000	4340/4340 VAR	1060	
MIL 18732	8620	1070	
QQ-N-281, 286	8627	1095	
QQS 763	8630 MOD	1141	
AMS 6512	9310	1146	
AMS 8699	52100		
AMS 6414	EN30B		
AMS 6415	17 Cr Ni Mo 6		
AMS 5667	A508 CL 2,3,4		
AMS 5659	A470 CL 4, 7, 8, 9		
	HY80, HY100		
	NITRALLOY 135		



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