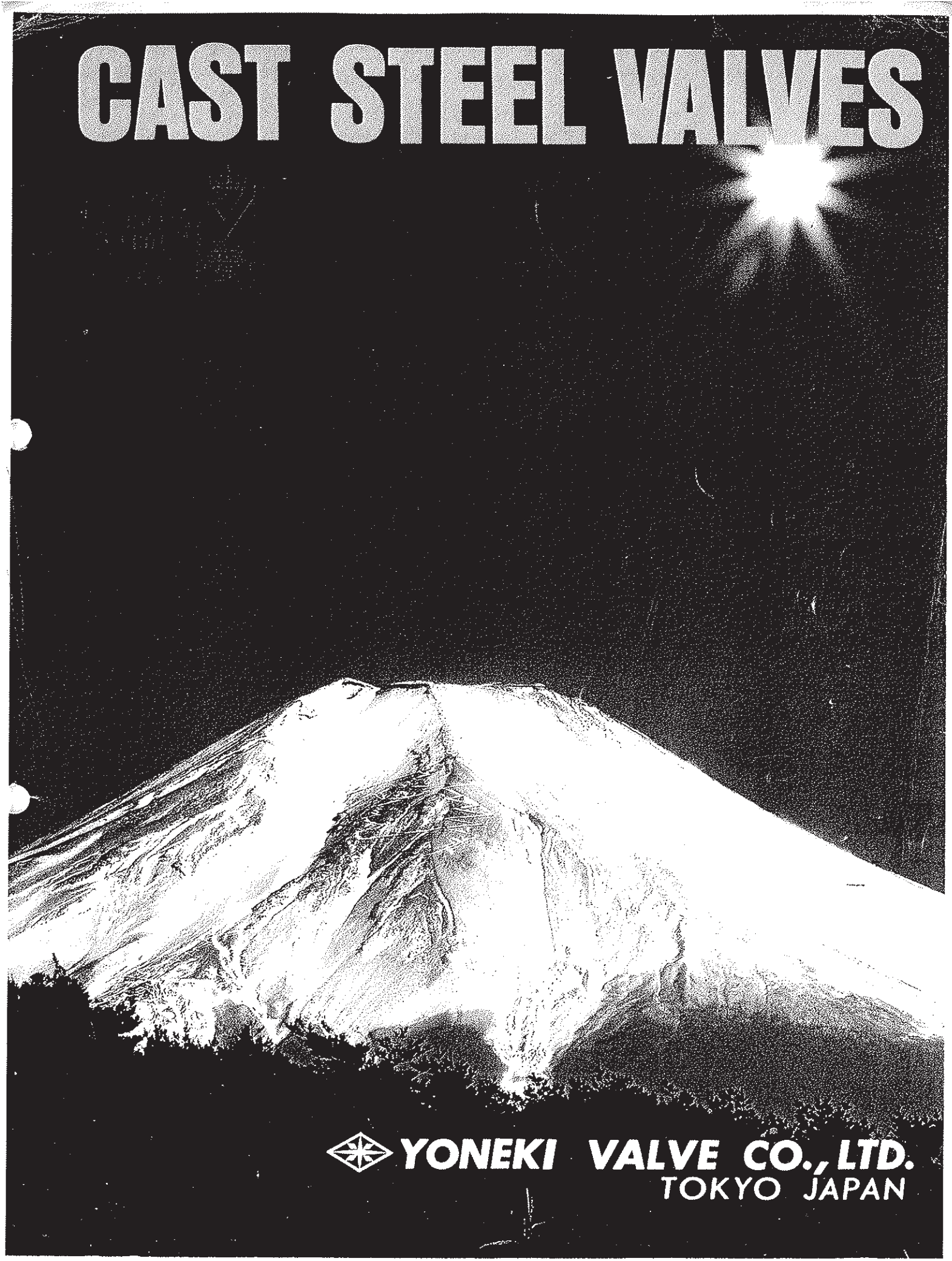
CAST STEEL VALVES



YONEKI VALVE CO., LTD.
TOKYO JAPAN

FIGURE NUMBER INDEX ABBREVIATIONS

TABLE 1

(6) TRIM MATERIAL

TRIM NO.	SEAT RING OR SURFACE	WEDGE/DISC OR SURFACE	STEM
01	13% CR.	13% CR.	13% CR.
02	304 S.S.	304 S.S.	304 S.S.
03	F310 (CR. 25-NI 20)	F310 (CR. 25-NI 20)	F310 (CR. 25-NI 20)
04	HARD 13% CR.	HARD 13% CR.	13% CR.
05	STELLITE	STELLITE	13% CR.
05A	NI-CR.	NI-CR.	13% CR.
06	CU-NI	13% CR.	13% CR.
07	13% CR.	HARD 13% CR.	13% CR.
08	STELLITE	13% CR.	13% CR.
08A	NI-CR.	13% CR.	13% CR.
09	MONEL	MONEL	13% CR.
10	316 S.S.	316 S.S.	316 S.S.
11	MONEL	STELLITE	MONEL
12	STELLITE	316 S.S.	316 S.S.
13	ALLOY 20	ALLOY 20	ALLOY 20
14	STELLITE	ALLOY 20	ALLOY 20
15	MONEL	MONEL	MONEL
16	BRONZE	BRONZE	BRONZE
17	HASTELLOY B	HASTELLOY B	HASTELLOY B
18	HASTELLOY C	HASTELLOY C	HASTELLOY C
19	STELLITE	304 S.S.	304 S.S.
20	STELLITE	STELLITE	304 S.S.
21	304L S.S.	304L S.S.	304L S.S.
22	STELLITE	304L S.S.	304L S.S.
23	STELLITE	STELLITE	304L S.S.
24	STELLITE	STELLITE	316 S.S.
25	316L S.S.	316L S.S.	316L S.S.
26	STELLITE	316L S.S.	316L S.S.
27	STELLITE	STELLITE	316L S.S.
28	321 S.S.	321 S.S.	321 S.S.
29	STELLITE	321 S.S.	321 S.S.
30	STELLITE	STELLITE	321 S.S.
31	347 S.S.	347 S.S.	347 S.S.
32	STELLITE	347 S.S.	347 S.S.
33	STELLITE	STELLITE	347 S.S.
34	NICKEL ALLOY	13% CR.	13% CR.
99	DESCRIPTION REQUIRED	DESCRIPTION REQUIRED	DESCRIPTION REQUIRED

LIST OF MATERIAL SPECIFICATIONS
(ASME B16.34–1996 / JPI– 75–65–2000)

TABLE 2

Material Group No.	Nominal Designation Steel	Applicable ASTM Specifications		Applicable JIS Sppecifications	
		Forging Spec.-Grade Notes	Casting Spec.-Grade Notes	Forging Spec.-Grade Notes	Casting Spec.-Grade Notes
1.1	Carbon	A105 (1)(3) A350-LF2 (1)	A216-WCB (1)	G3203-SFVC-2A (1)(3) G3205-SFL2 (1)	G5151-SCPH2 (1)
1.2	Carbon		A216-WCC (1) A352-LCC (8)		
	2–1/2Ni		A352-LC2 (8)		G5152-SCPL21 (8)
	3–1/2Ni	A350-LF3 (8)	A352-LC3 (8)	G3205-SFL3 (8)	G5152-SCPL31 (8)
1.3	Carbon		A352-LCB (8)		G5152-SCPL1 (8)
1.5	C–1/2Mo	A182-F1 (2)	A217-WC1 (2)(4) A352-LC1 (8)	G3203-SFVA F1 (2)	G5151-SCPH11 (2)(4) G5152-SCPL11 (8)
1.9	1Cr–1/2Mo 1–1/4Cr–1/2Mo	A182-F12 Cl.2 (4)(9) A182-F11 Cl.2 (4)(9)	A217-WC6 (4)(10)	G3203-SFVA F12 (4)(9) G3203-SFVA F11A (4)(9)	G5151-SCPH21 (4)(10)
1.10	2–1/4Cr–1/2Mo	A182-F22 Cl.3 (9)	A217-WC9 (4)(10)	G3203-SFVA F22B (9)	G5151-SCPH32 (4)(10)
1.13	5Cr–1/2Mo	A182-F5a A182-F5	A217-C5 (4)	G3203-SFVA F5D G3203-SFVA F5B	G5151-SCPH61 (4)
1.14	9Cr–1Mo	A182-F9	A217-C12 (4)	G3203-SFVA F9	
2.1	18Cr–8Ni	A182-F304 (5) A182-F304H	A351-CF8 (5) A351-CF3 (11)	G3214-SUSF304 (5)	G5121-SCS13A (5) G5121-SCS19A (11)
2.2	16Cr–12Ni–2Mo 18Cr–9Ni–2Mo	A182-F316 (5) A182-F316H	A351-CF3M (12) A351-CF8M (5)	G3214-SUSF316 (5)	G5121-SCS16A (12) G5121-SCS14A (5)
2.3	18Cr–8Ni 16Cr–12Ni–2Mo	A182-F304L (11) A182-F316L (12)		G3214-SUSF304L (11) G3214-SUSF316L (12)	
2.4	18Cr–10Ni–Ti	A182-F321 (13) A182-F321H (14)		G3214-SUSF321 (13) G3214-SUSF321H (14)	----
2.5	18Cr–10Ni–Cb	A182-F347 (13) A182-F347H (14)	A351-CF8C (5)	G3214-SUSF321 (13) G3214-SUSF321H (14)	G5121-SCS21 (5)
3.1	Cr–Ni–Fe–Mo–Cu–Cb	B462 N08020 (6)	A351-CN7M (7)		

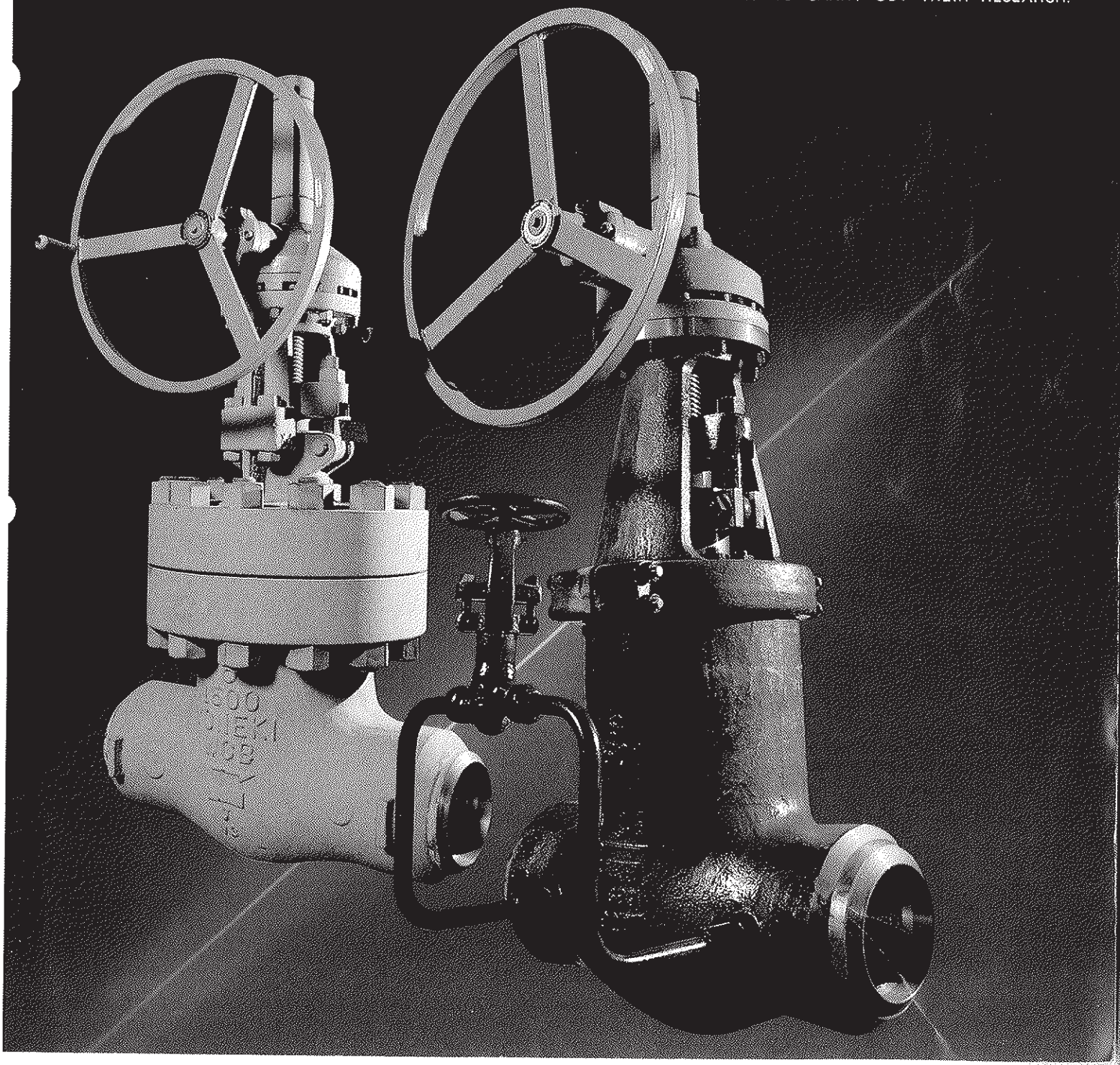
NOTES:
(1) Upon prolonged exposure to temperatures above about 800°F (427°C), the carbide phase of steel may be converted to graphite.
(2) Upon prolonged exposure to temperatures above about 875F (468°C), the carbide phase of carbon-molybdenum steel may be converted to graphite.
(3) Only killed steel shall be used above 850°F (454°C).
(4) Use normalized and tempered material only.
(5) At temperatures over 1,000°F (538°C), use only when the carbon content is 0.04% or hiigher.
(6) Use annealed material only.
(7) Use solution annealed material only.
(8) Not to be used over 650°F (343°C).
(9) Permissible. but not recommended for prolonged use above 1,100°F (593°C).
(10) Not to be used over 1,100°F (593°C).
(11) Not to be used over 800°F (427°C).
(12) Not to be used over 850°F (454°C).
(13) Not to be used over 1,000°F (538°C).
(14) At temperature over 1,000°F (540°C), use only if the material is heat treated by heating to a minimum temperature of 2,000°F (1093°C).

QUALITY ASSURANCE

OUR QUALITY ASSURANCE SYSTEM HAS BEEN VERY EFFECTIVE, AS WE HAVE GAINED THE REPUTATION FOR PRODUCING VERY HIGH QUALITY VALVES. OUR CUSTOMERS HAVE THE CONFIDENCE IN KNOWING THAT NO VALVE WILL BE SHIPPED FROM OUR FACTORY UNTIL IT HAS UNDERGONE THE MOST STRINGENT QUALITY CONTROL, TESTING, AND INSPECTION PROCEDURES.

WE HAVE THE CAPABILITY TO PERFORM ALL POSSIBLE NON-DESTRUCTIVE TESTS INCLUDING RADIOGRAPHIC, MAGNETIC PARTICLE, ULTRA-SONIC, AND LIQUID PENETRANT EXAMINATIONS.

OUR METALLURGISTS AND MECHANICAL ENGINEERS ARE CONSTANTLY TRYING TO DEVELOP NEW AND IMPROVED TECHNOLOGY, SO WE CAN ALWAYS OFFER THE HIGHEST QUALITY VALVES PRODUCED IN THE WORLD. OUR RESEARCH PERSONNEL HAVE AVAILABLE A WIDE RANGE OF MODERN EQUIPMENT TO CARRY OUT THEIR RESEARCH.

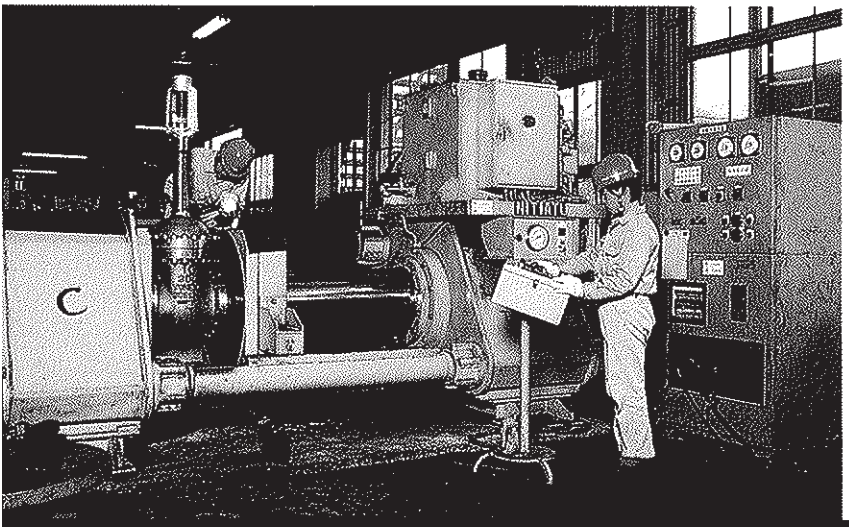


INSPECTION AND TESTING

INSPECTION AND TESTING IS A VERY IMPORTANT PART OF OUR MANUFACTURING PROCESS. OUR INSPECTION ENGINEERS HAVE AT THEIR DISPOSAL THE NECESSARY EQUIPMENT AND TECHNIQUE TO COMPLY WITH INSPECTION AND TESTING REQUIREMENTS OF EACH CUSTOMER'S SPECIFICATION.

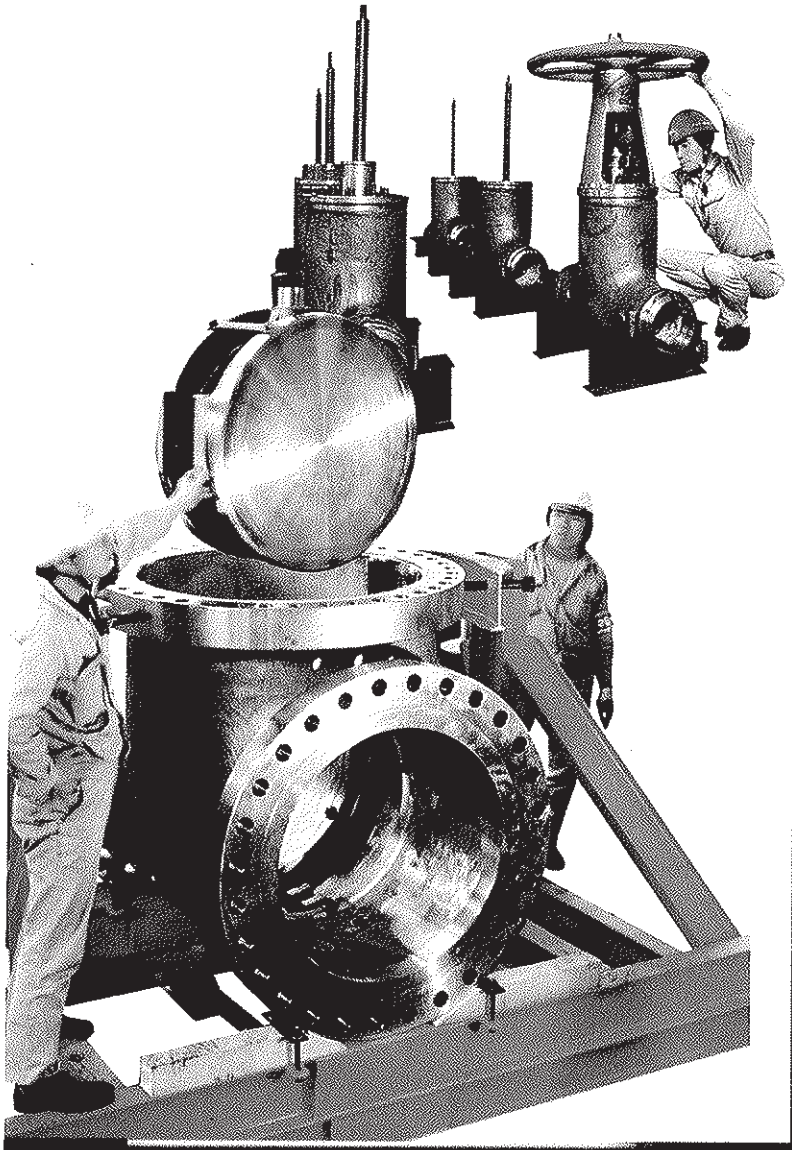
OUR TESTING EQUIPMENT INCLUDES NON-DESTRUCTIVE TESTING, BOILER TESTING, AND CRYOGENIC SERVICE TESTING EQUIPMENT. THESE TESTING EQUIPMENT GUARANTEES PRODUCT QUALITY AND DEPENDABILITY TO OUR CUSTOMERS.

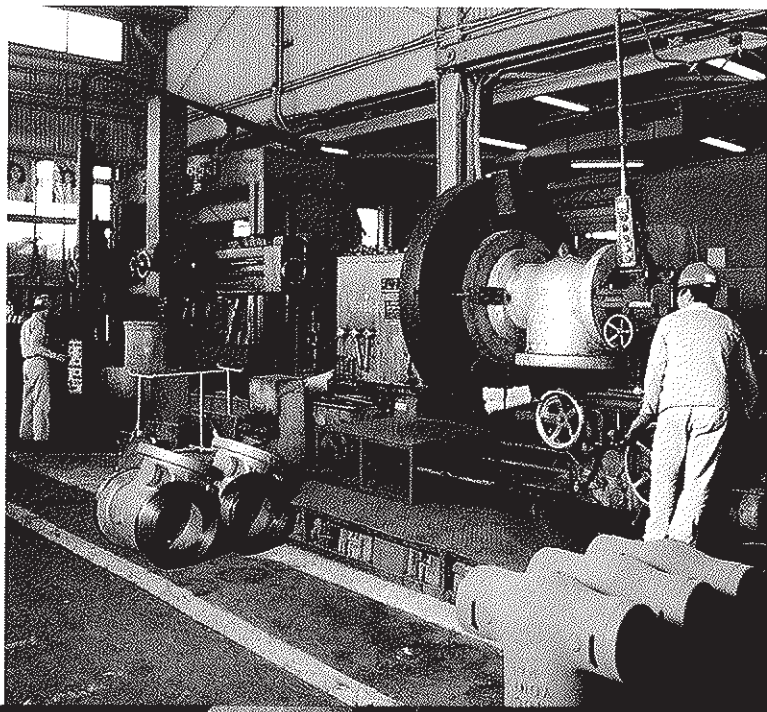
OUR CAPABILITY ENCOMPASSES ALL TEMPERATURE AND PRESSURE RANGES, FROM VERY LOW TO VERY HIGH TEMPERATURE AND PRESSURE RATINGS. IT IS BECAUSE OF ALL THESE INSPECTION AND TESTING PROCEDURES THAT YOU CAN BE SURE THE VALVES WILL PERFORM EFFICIENTLY AND DEPENDABLY IN THE FIELD, WHEN YOU BUY YONEKI VALVES.

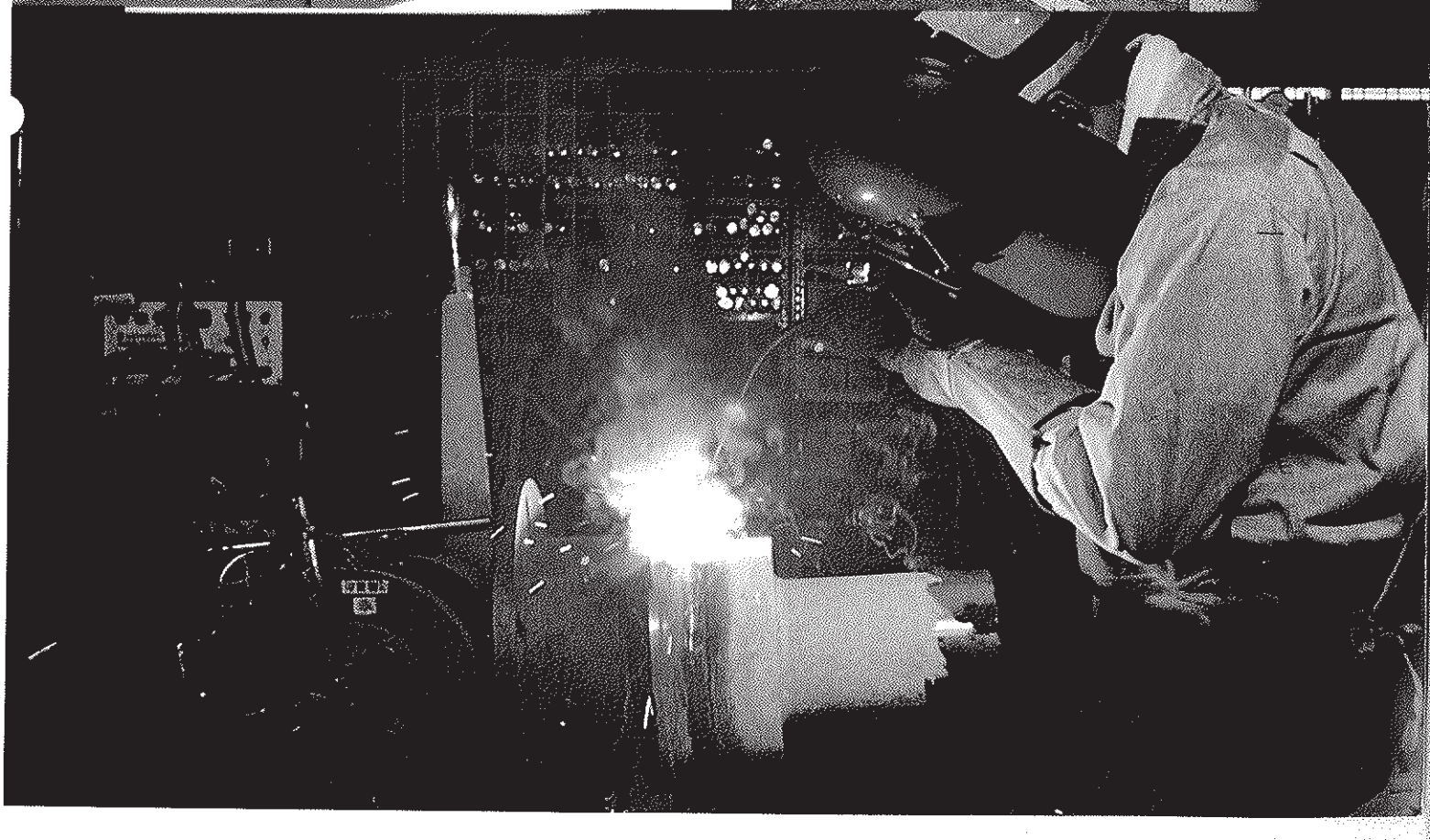


MANUFACTURING

OUR CONSCIENTIOUS FACTORY PERSONNEL ARE HIGHLY MOTIVATED TO PRODUCE HIGH QUALITY VALVES, STRICTLY ADHERING TO DRAWINGS PERPARED BY OUR RENOWNED ENGINEERING STAFF. OUR MANUFACTURING PROCESS HAS ONLY ONE GOAL, TO PRODUCE THE BEST VALVES WITH THE BEST EQUIPMENT AND TECHNOLOGY AVAILABLE.
YOU CAN BE ASSURED THAT ALL OF OUR MANUFACTURING SKILLS, REFINED OVER MANY YEARS, ARE USED IN EVERY VALVE STAMPED WITH THE NAME YONEKI. THIS IS YOUR ASSURANCE THAT YOU HAVE PURCHASED THE BEST VALVE AVAILABLE IN THE WORLD.







DELIVERY