

NUMBER 12
 A 041 4733
 1 041 5120

MODE A SUCTION FROM CONDENSATE STORAGE REACTOR AT HIGH PRESSURE, SUPPRESSION POOL AT ELEVATED PRESSURE

POSITION	1	2A	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
FLOW SEE NOTE 2	-	182	182	182	-	-	0	-	2.6	12.4	12.4	0	0	0	0.03	-	0.005	0	-	0	0
PRESS kg/cm ² abs	1.0	0	0	0	1.3	-	-	0.4	0	1.4	0.3	0	3.2	0	0.7	0	0	0	0	0	0
TEMP °C	40	40	40	40	60	-	-	280	SAT	SAT	129	40	40	40	110	40	40	40	40	40	40
MAX/MIN TEMP °C	40/10	40/10	40/10	40/10	77/10	-	-	280/18	280/18	121/10	121/10	40/10	40/10	40/10	121/10	60/10	60/10	60/10	40/10	-	-

MODE B SUCTION FROM CONDENSATE STORAGE REACTOR AT LOW PRESSURE, SUPPRESSION POOL AT ELEVATED PRESSURE

POSITION	1	2A	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
FLOW SEE NOTE 2	-	182	182	182	-	-	0	-	5.6	5.3	5.3	0	0	0	0.03	-	0.005	0	-	0	0
PRESS kg/cm ² abs	1.0	0	0	1.3	-	-	1.2	0	1.4	0.3	0	3.2	0	0.7	0	0	0	0	0	0	0
TEMP °C	40	40	40	40	60	-	-	186	SAT	SAT	129	40	40	40	110	40	40	40	40	40	40
MAX/MIN TEMP °C	40/10	40/10	40/10	40/10	77/10	-	-	186/18	186/18	121/10	121/10	40/10	40/10	40/10	121/10	60/10	60/10	60/10	40/10	-	-

MODE C SUCTION FROM SUPPRESSION POOL REACTOR AT HIGH PRESSURE, SUPPRESSION POOL AT LOW PRESSURE

POSITION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
FLOW SEE NOTE 2	-	182	182	182	-	-	182	-	12.4	12.4	0	0	0	0	0.03	-	0.005	0	-	0	0
PRESS kg/cm ² abs	-	0	0	0	1.3	1.4	1.4	0.4	0	1.2	0.3	0	3.2	0	0.7	0	0	0	0	0	0
TEMP °C	-	60	60	60	60	60	60	280	SAT	SAT	103	60	60	60	110	71	71	71	60	-	-
MAX/MIN TEMP °C	-	77/10	77/10	77/10	77/10	77/10	77/10	280/18	280/18	121/10	121/10	77/10	77/10	77/10	121/10	77/10	77/10	77/10	77/10	-	-

MODE D SUCTION FROM SUPPRESSION POOL REACTOR AT LOW PRESSURE, SUPPRESSION POOL AT LOW PRESSURE

POSITION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
FLOW SEE NOTE 2	-	182	182	182	-	-	182	-	5.6	5.3	5.3	0	0	0	0.03	-	0.005	0	-	0	0
PRESS kg/cm ² abs	-	0	0	1.3	1.4	1.4	0.4	0	1.2	0.3	0	3.2	0	0.7	0	0	0	0	0	0	0
TEMP °C	-	60	60	60	60	60	60	186	SAT	SAT	103	60	60	60	110	71	71	71	60	-	-
MAX/MIN TEMP °C	-	77/10	77/10	77/10	77/10	77/10	77/10	186/18	186/18	121/10	121/10	77/10	77/10	77/10	121/10	77/10	77/10	77/10	77/10	-	-

MODE E TEST MODE SUCTION FROM SUPPRESSION POOL REACTOR AT HIGH PRESSURE, SUPPRESSION POOL AT LOW PRESSURE

POSITION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
FLOW SEE NOTE 2	-	182	182	-	-	-	182	-	14.8	14.1	14.1	0	0	0	0.03	-	0.005	0	-	182	182
PRESS kg/cm ² abs	-	0	0	-	1.0	1.4	1.4	0.4	1.2	0.3	0	3.2	0	0.7	0	0	0	0	0	0	0
TEMP °C	-	33	33	-	33	35	35	280	SAT	SAT	103	35	35	35	110	40	40	40	30	33	33
MAX/MIN TEMP °C	-	77/10	77/10	-	77/10	77/10	77/10	280/18	280/18	121/10	121/10	77/10	77/10	77/10	121/10	77/10	77/10	77/10	77/10	77/10	77/10

(SEE NOTE 9)

POSITION	1A-2A	2-2B	3-3A	3A-3B	5-7	8A-8	10-11	11-11A	3-2	12-13	13-14	15	17	18-20	3-18	19-19A	19A-21	3-20	23-21
PEAK PRESS kg/cm ² g	N/A	N/A	128.0	128.0	128.0	128.0	11.2	N/A	128.0	N/A	N/A	N/A	N/A	N/A	129.0	129.0	N/A	128.0	N/A
MAX OPERATING PRESS kg/cm ² g	14	14	120	87.9	3.10	87.9	10	10	120	8.8	8.8	7.7	3.16	14	120	120	3.16	120	120
MAX OPERATING TEMP °C	77	77	77	302	77	302	185	104	77	77	77	121	88	88	77	77	104	77	104
ESTIMATED LINE SIZE mm	200	200	150	150	200	200	350	350	30	30	30	25	40	50	50	50	50	100	100

PEAK PRESSURE IS THE MAXIMUM PRESSURE ANTICIPATED DURING A TRANSIENT PERIOD WITH ALL OF THE CONTRIBUTING ELEMENTS AT A WARNING IT WOULD BE EXPECTED TO OCCUR LESS THAN 1% OF SYSTEM OPERATING TIME.

THE PRESSURE AT THIS POSITION DEPENDS ON PUMP ARRANGEMENT AND MAY BE VARIED WITHIN THE FOLLOWING LIMITS.

- POSITION 1A: SET TO PUMP FROM CONDENSATE STORAGE TANK
- 2: MINIMUM HEAD = 7.3 m (24 FT) ABOVE PUMP FLOOR
- 3: MAXIMUM PUMP TOTAL DYNAMIC HEAD: 600 m FOR MODES A & C; 184 m FOR MODES B & D
- 4: MAXIMUM PRESSURE DROP BETWEEN POSITION 3 AND 5 = 1.1 kg/cm² (SEE NOTE 5)
- 5: MAXIMUM PRESSURE ALLOWED FOR RATED SYSTEM PERFORMANCE = 1.8 kg/cm² abs
- 12: MAXIMUM PRESSURE ALLOWED = 6.8 kg/cm² abs (318)
- 14: PRESSURE IS 0.35 kg/cm² LESS THAN POSITION 13
- 15: SUFFICIENT VACUUM TO PREVENT TURBINE SHUT-OUT-LEAKAGE TO BE SPECIFIED ON TURBINE VENDOR DRAWINGS.
- 17: MAXIMUM PRESSURE AVAILABLE = 2.1 kg/cm² abs
- 18: MAXIMUM PRESSURE AVAILABLE = 4.8 kg/cm² abs
- 19: SUFFICIENT PRESSURE TO RETURN TO SUPPRESSION POOL
- 20: SUFFICIENT PRESSURE TO RETURN TO SUPPRESSION POOL

TABLE 1 VALVE POSITION CHART

VALVE	F04	F05	F06	F08	F07	F09	F08	F09	F08	F08
MODE A	0	C	0	0	0	0	0	0	C	C
MODE B	0	C	0	0	0	0	0	0	C	C
MODE C	0	0	C	0	0	0	0	0	C	C
MODE D	0	0	C	0	0	0	0	0	C	C
MODE E	C	0	C	0	0	0	0	0	C	T

0 = OPEN C = CLOSE T = THROTTLE

SI APERTURE CARD

Nuclear Energy Corp. 103E1798
 31 10 80

PDR RIDS

9202270120

