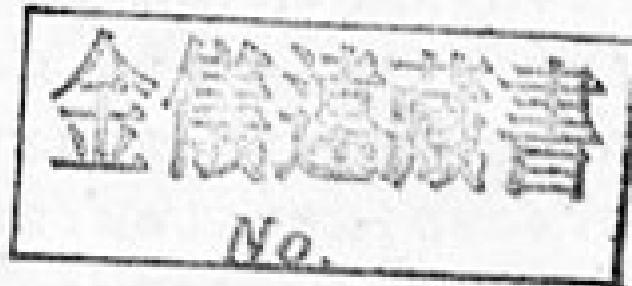


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朝鮮總督府內務局土木課內

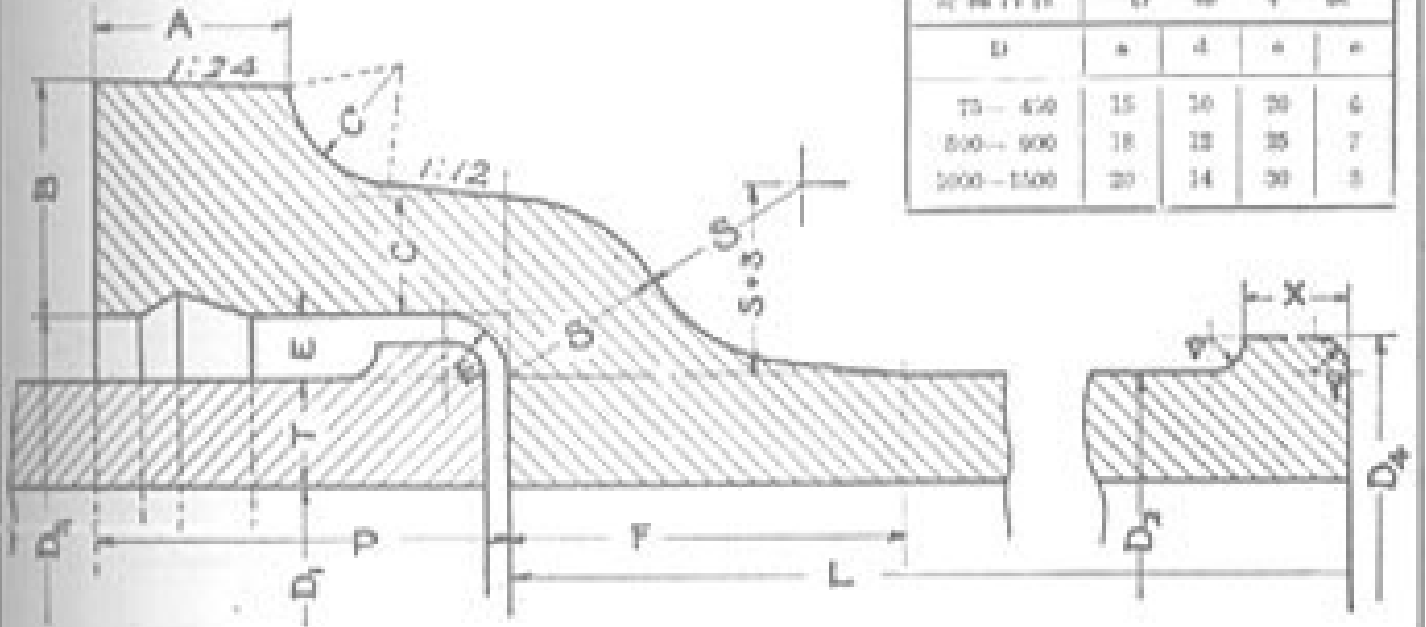
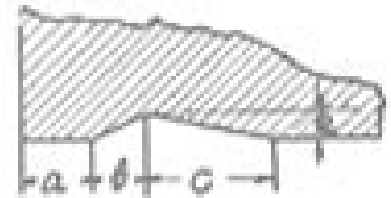
水理土木研究會編纂

昭和十年秋

1935

第二號 低壓管

第一表 直 管



公稱内径	各 部 寸 法			
D	a	b	c	e
75—450	15	10	30	6
500—900	18	12	35	7
1000—1500	20	14	38	8

基本図——単位はmm(1寸=25.4mm)

公称内径 D	壁厚 T	管 径		管 径		管 径		管 径		管 径		管 径		管 径		管 径		管 径		公称内径 D	
		D ₁	D ₂	D ₃	A	B	C	F	E	F	B	D ₄	Y	X	Z	L	承口 外径	承口 内径	重量 kg		重量 kg
75	8.7	70.0	65.4	115.4	33	35	15	30	10	71.4	35	105.4	5	15	4	3000	7.71	17.4	18.4	44.5	75
100	10.1	89.0	84.4	129.4	37	39	16	32	11	73.1	36	111.4	6	16	5	3000	10.1	20.0	21.0	56.6	100
150	13.5	136.0	127.4	187.4	47	49	21	42	15	74.8	37	132.4	8	21	7	3000	13.5	28.5	30.0	110	150
200	16.9	182.0	173.4	245.4	57	59	27	54	19	76.5	38	145.4	10	27	9	3000	16.9	35.0	36.5	130	200
250	19.3	228.0	219.4	303.4	67	69	33	66	23	78.2	39	158.4	12	33	11	3000	19.3	42.0	43.5	150	250
300	21.7	274.0	265.4	361.4	77	79	39	78	27	80.0	40	171.4	14	39	13	3000	21.7	49.0	50.5	170	300
350	24.1	320.0	311.4	419.4	87	89	45	90	31	81.7	41	184.4	16	45	15	3000	24.1	56.0	57.5	190	350
400	26.5	366.0	357.4	477.4	97	99	51	102	35	83.4	42	197.4	18	51	17	3000	26.5	63.0	64.5	210	400
450	28.9	412.0	403.4	535.4	107	109	57	114	39	85.1	43	210.4	20	57	19	3000	28.9	70.0	71.5	230	450
500	31.3	458.0	449.4	593.4	117	119	63	126	43	86.8	44	223.4	22	63	21	3000	31.3	77.0	78.5	250	500
600	37.7	546.0	537.4	691.4	137	139	75	150	51	88.5	45	236.4	24	75	23	3000	37.7	84.0	85.5	290	600
700	44.1	634.0	625.4	789.4	157	159	87	174	59	90.2	46	249.4	26	87	25	3000	44.1	91.0	92.5	330	700
800	50.5	722.0	713.4	887.4	177	179	99	198	67	91.9	47	262.4	28	99	27	3000	50.5	98.0	99.5	370	800
900	56.9	810.0	801.4	985.4	197	199	111	222	75	93.6	48	275.4	30	111	29	3000	56.9	105.0	106.5	410	900
1000	63.3	898.0	889.4	1083.4	217	219	123	246	83	95.3	49	288.4	32	123	31	3000	63.3	112.0	113.5	450	1000
1100	69.7	986.0	977.4	1181.4	237	239	135	270	91	97.0	50	301.4	34	135	33	3000	69.7	119.0	120.5	490	1100
1200	76.1	1074.0	1065.4	1279.4	257	259	147	294	99	98.7	51	314.4	36	147	35	3000	76.1	126.0	127.5	530	1200
1300	82.5	1162.0	1153.4	1377.4	277	279	159	318	107	100.4	52	327.4	38	159	37	3000	82.5	133.0	134.5	570	1300
1400	88.9	1250.0	1241.4	1475.4	297	299	171	342	115	102.1	53	340.4	40	171	39	3000	88.9	140.0	141.5	610	1400
1500	95.3	1338.0	1329.4	1573.4	317	319	183	366	123	103.8	54	353.4	42	183	41	3000	95.3	147.0	148.5	650	1500

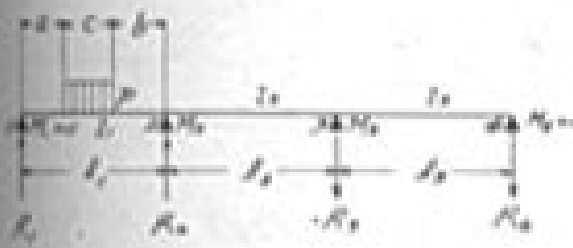
$$M_0 = - \frac{2K_1(1+K_2)L_1 - K_2L_2}{[4(1+K_1)(1+K_2) - K_2]L_1^2} \xi$$

$$R_0 = \frac{1}{L_1}(Pa + M_0 - M_1) = \frac{1}{L_1} M_0$$

$$R_1 = \frac{1}{L_1} M_0 \quad R_2 = -\frac{1}{L_2} M_0 + \frac{1}{L_2}(Pb + M_1 - M_2)$$

$$R_3 = \frac{1}{L_2} M_0$$

b 等布荷重



K_1, K_2 同前 + 全 1

$$\xi = \frac{pL^2}{2} (2a^2b + 4a^2c + 12abc + 4ab^2 + 4b^2c + 4c^2(a+b) + c^3)$$

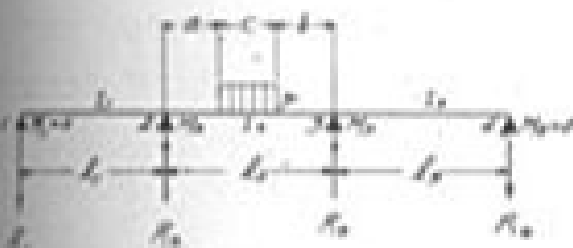
$$M_0 = - \frac{2K_1(1+K_2)}{[4(1+K_1)(1+K_2) - K_2]L_1^2} \xi$$

$$M_1 = - \frac{2K_2(1+K_1)L_2 - K_1L_1}{[4(1+K_1)(1+K_2) - K_2]L_2^2} \xi$$

$$R_1 = \frac{L_1 a + c}{2L_1} p + \frac{1}{L_1} M_0$$

$$R_2 = \frac{L_2 a + c}{2L_2} p - \frac{1}{L_2} M_0 + \frac{1}{L_2} (M_1 - M_2)$$

$$R_3 = \frac{1}{L_2} (M_1 - M_2) = \frac{1}{L_2} M_0 \quad R_4 = \frac{1}{L_2} M_0$$



K_1, K_2 同前 + 全 1

$$\xi = \frac{pL^2}{2} (6ab(a+2b+3c) + 2c(a^2+2b^2) + 4c^2(a+b) + c^3)$$

$$\zeta = \frac{pL^2}{2} (6ab(2a+b+3c) + 2c(2a^2+b^2) + 4c^2(a+b) + c^3)$$

$$M_0 = - \frac{2(1+K_2)\xi - K_2\zeta}{[4(1+K_1)(1+K_2) - K_2]L_1^2}$$

$$M_1 = - \frac{2K_2(1+K_1)\zeta - K_1\xi}{[4(1+K_1)(1+K_2) - K_2]L_2^2}$$

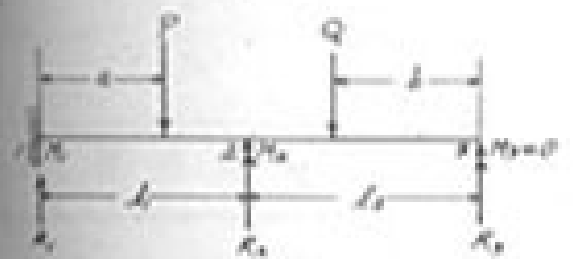
$$R_1 = \frac{1}{L_1} M_0 \quad R_2 = -\frac{1}{L_2} M_0 + \frac{L_1 a + c}{2L_2} p + \frac{1}{L_2} (M_1 - M_2)$$

$$R_3 = \frac{L_2 a + c}{2L_2} p + \frac{1}{L_2} (M_1 - M_2) - \frac{1}{L_2} M_0 \quad R_4 = \frac{1}{L_2} M_0$$

B 一端固定 他端支承 / 場合

① 二点荷

a 集中荷重



$$\xi = 3al + 6l_1b$$

$$M_1 = - \frac{Pa(l_1 - a)}{L_1^2} (2l_1^2 + 6l_1l_2 - 3al - 2al_2) + \frac{Qb}{L_1^2} (l_2 - b)(2l_2 - b)$$

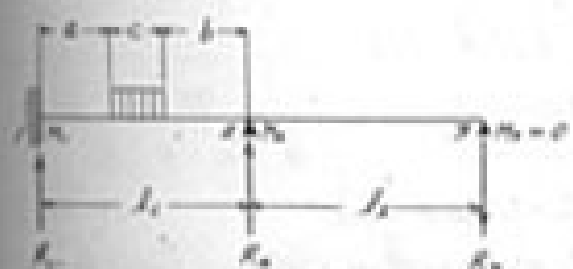
$$M_2 = - \frac{3P}{L_1^2} (l_1 - a)a - \frac{3Q}{L_1^2} b(l_2 - b)$$

$$R_1 = \frac{1}{L_1} (P(l_1 - a) + (M_2 - M_1))$$

$$R_2 = \frac{1}{L_1} (Pa + M_1 - M_2) + \frac{1}{L_2} (Q(l_2 - b) - M_2)$$

$$R_3 = \frac{1}{L_2} (Qb + M_2)$$

b 等布荷重



$$\xi = 3al + 6l_1b$$

$$M_1 = - \frac{pL^2}{2} (2a + c) + \frac{pL^2}{12L_1^2} (2L(L_1 + L_2)(a^2 + (a+c)(2a+c)) - 2(L_2 - al_2)(2a+c)(a+c) + a^3)$$

$$M_2 = - \frac{pL^2}{2L_2^2} (4L_2 \{ (a+c)(2a+c) + a^2 \} - 2(2a+c) \{ (a+c)^2 + a^2 \})$$

$$R_1 = \frac{(2a+c)L}{2L_1} p + \frac{1}{L_1} (M_2 - M_1)$$

$$R_2 = \frac{Qa+c}{2L_2} p + \frac{1}{L_2} (M_1 - M_2) - \frac{1}{L_2} M_0$$