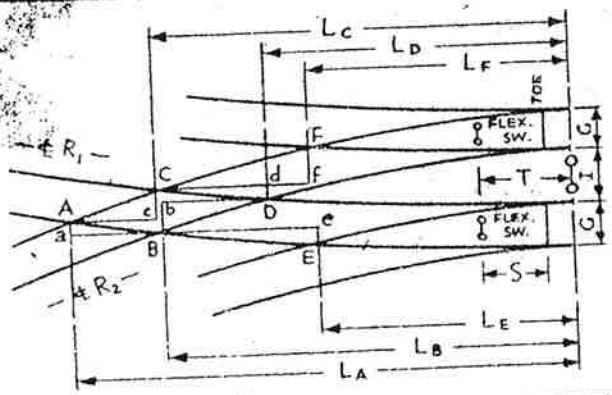
PERMANENT WAY

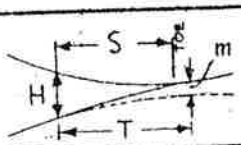
NOTES

DOUBLE JUNCTIONS (6)

FLEXIBLE (AND "STRAIGHT") SWITCHES, IN CURVES OF CONTRARY FLEXURE.

THESE NOTES ARE INTENDED FOR THE GUIDANCE AND ASSISTANCE OF STAFF ENGAGED UPON PERMANENT WAY WORK, THEY DO NOT IN ANY WAY MODIFY, OR AMEND THE INSTRUCTIONS LAID DOWN IN E.D.I., STANDARD DRAWINGS, CIRCULARS ETC., WHICH SHOULD BE REFERRED TO IN ALL CASES.





$$m = H - \frac{R_1 R_2}{(R_1+R_2)2Z^2}$$

$$T = \frac{R_1 R_2}{(R_1+R_2)Z}$$

TYPE OF SWITCH	LENGTH S	H	Z	$\log Z$	$2Z^2$	$\log 2Z^2$
B	22·5	·83613	19	1·278 821	722	2·8585942
C	28·5	·85239	23·52	1·3713627	1106	3·0437554
D	34·6	·83333	30·57	1·4853056	1869	3·2716412
18	18	·375	48	1·6812412	4608	3·6635125
20	20	·375	53·3	1·7269988	5688·8	3·7550276
30	30	·375	80	1·9030900	12800	4·1072100

LENGTHS OF LEGS

$$AB = \sqrt{(L_A - L_B)^2 + (Aa)^2} \qquad BD = \sqrt{(L_B - L_D)^2 + (Bb)^2} \qquad BE = \sqrt{(L_B - L_E)^2 + (Ee)^2}$$

$$AC = \sqrt{(L_A - L_C)^2 + (Cc)^2} \qquad CD = \sqrt{(L_C - L_D)^2 + (Dd)^2} \qquad CF = \sqrt{(L_C - L_F)^2 + (Ff)^2}$$

$$L_A = \frac{1}{2(R_1+R_2+m)}\sqrt{(2R_1+m)(2R_2+m)(I+2G-m)(2R_1+2R_2+[I+2G]+m)}$$

$$L_B = \frac{1}{2(R_1+R_2+m)}\sqrt{(2R_1+G+m)(2R_2-G+m)(I+G-m)(2R_1+2R_2+[I+G]+m)}$$

$$L_C = \frac{1}{2(R_1+R_2+m)}\sqrt{(2R_1-G+m)(2R_2+G+m)(I+G-m)(2R_1+2R_2+[I+G]+m)}$$

$$L_D = \frac{1}{2(R_1+R_2+m)}\sqrt{(2R_1+m)(2R_2+m)(I-m)(2R_1+2R_2+I+m)}$$

$$L_E = \frac{1}{2(R_1+R_2+m)}\sqrt{(2R_1+[I+G]+m)(2R_2-[I+G]+m)(G-m)(2R_1+2R_2+G+m)}$$

$$L_F = \frac{1}{2(R_1+R_2+m)}\sqrt{(2R_1-[I+G]+m)(2R_2+[I+G]+m)(G-m)(2R_1+2R_2+G+m)}$$

Ee.	Aa. & Dd.	Cc. & Bb.	Ff.
$\frac{2R_2}{2(R_1+R_2+m)} \cdot I$	$\frac{2R_2+[I+G]}{2(R_1+R_2+m)} \cdot G$	$\frac{2R_1+[I+G]}{2(R_1+R_2+m)} \cdot G$	$\frac{2R_2}{2(R_1+R_2+m)} \cdot I$

CROSSING ANGLES

$$N_A = \sqrt{\frac{(2R_1+m)(2R_2+m)}{4(I+2G-m)(2R_1+2R_2+[I+2G]+m)}}$$

$$N_D = \sqrt{\frac{(2R_1+m)(2R_2+m)}{4(I-m)(2R_1+2R_2+I+m)}}$$

$$N_B = \sqrt{\frac{(2R_1+G+m)(2R_2-G+m)}{4(I+G-m)(2R_1+2R_2+[I+G]+m)}}$$

$$N_E = \sqrt{\frac{(2R_1+[I+G]+m)(2R_2-[I+G]+m)}{4(G-m)(2R_1+2R_2+G+m)}}$$

$$N_C = \sqrt{\frac{(2R_1-G+m)(2R_2+G+m)}{4(I+G-m)(2R_1+2R_2+[I+G]+m)}}$$

$$N_F = \sqrt{\frac{(2R_1-[I+G]+m)(2R_2+[I+G]+m)}{4(G-m)(2R_1+2R_2+G+m)}}$$