

**POLE AND FOUNDATION STRENGTHS**

POLE DATA				POLE STRENGTH		FOUNDATION STRENGTH									DEFLECTION
POLE TYPE (LINE)	LENGTH OF POLE metres	LENGTH IN GROUND metres	MATERIAL SECTION mm	MAX. PERMISSIBLE (kN) FORCE AT TOP OF POLE		EQUIVALENT POLE TOP LOADING (kN) - REFER NOTES 2 & 3									DEFLECTION AT TOP OF POLE AT MAX. PERMISSIBLE LOAD STRONG DIR. (mm)
				STRONG DIRECTION	WEAK DIRECTION	SOIL GP 1 (GOOD)			SOIL GP 2 (MED)			SOIL GP 3 (POOR)			
		FD D=450	FD D=610			FD D=770	FD D=450	FD D=610	FD D=770	FD D=450	FD D=610	FD D=770			
<b>STANDARD POLES</b>															
9B	9.0	1.7	150 x 75 PFC	18.7	5.7	-	13.7	17.2	-	8.9	11.4	-	4.4	5.5	72
9C	9.0	1.7	200 x 75 PFC	24.3	9.7	-	13.7	17.2	-	8.9	11.4	-	4.4	5.5	73
10.5B	10.5	1.8	150 x 75 PFC	15.8	4.7	-	13.7	17.2	-	8.9	11.4	-	4.4	5.5	103
10.5C	10.5	1.8	200 x 75 PFC	20.7	8.1	-	13.7	17.2	-	8.9	11.4	-	4.4	5.5	105
12.0B	12.0	2.0	150 x 75 PFC	13.8	4.1	-	16.6	20.9	-	11.0	13.9	-	5.5	6.9	135
12.0C	12.0	2.0	200 x 75 PFC	18.0	7.1	-	16.6	20.9	-	11.0	13.9	-	5.5	6.9	137
R12.5C	12.5	2.3	323ΦX4.7	10	-	21.6	29.28	36.96	14.4	19.52	24.64	7.2	9.76	12.32	260
13.5B	13.5	2.1	150 x 75 PFC	12.2	3.6	-	16.9	21.5	-	11.1	14.0	-	5.5	6.9	177
13.5C	13.5	2.1	200 x 75 PFC	15.9	6.2	-	16.9	21.5	-	11.1	14.0	-	5.5	6.9	179
R14C	14	2.4	323ΦX5.4	8.5	-	20.97	28.42	35.88	13.98	18.95	23.92	6.99	9.47	11.96	325
<b>"D" POLE EQUIVALENT</b>															
10.5D	11.85	3.15	250 x 90 PFC	32.5	14.5	-	-	83.6	-	-	54.2	-	-	27.1	109
12.0D	13.15	3.15	250 x 90 PFC	28.6	12.6	-	-	75.2	-	-	48.8	-	-	24.4	139
R12.5D	12.5	3	457ΦX9.8	36	-	-	50.13	63.28	-	33.42	42.19	-	16.71	21.90	164
13.5D	14.55	3.15	250 x 90 PFC	25.7	11.1	-	-	67.8	-	-	44.0	-	-	22.0	176
R14D	14	3	457ΦX9.8	34	-	-	44.63	56.34	-	29.75	37.56	-	14.87	18.78	219
16.5D	16.5	3.15	250 x 90 PFC	21.6	10.1	-	-	58.1	-	-	38.7	-	-	19.3	278
<b>18.5D TERMINATION POLES</b>															
18.5D	18.5	3.5	250 x 90 PFC	32.4	8.4	-	-	59.0	-	-	29.0	-	-	9.3	213

**WIND LOADS**

POLE DATA (REFER NOTE 4.)			
WIND LOAD ON POLE AT TOP (N) @1200 MPα		WIND LOAD ON POLE AT TOP (N) @1583 MPα	
STRONG DIRECTION	WEAK DIRECTION	STRONG DIRECTION	WEAK DIRECTION
657	1018	868	1344
876	1018	1156	1344
783	1144	1034	1510
1044	1144	1378	1510
900	1272	1138	1678
1200	1272	1584	1678
1977	-	2608	-
1026	1407	1354	1858
1368	1407	1806	1858
2248	-	2966	-
1305	1118	1722	1476
1500	1281	1980	1690
2605	-	3436	-
1710	1429	2256	1886
3016	-	3979	-
2003	1869	2644	2466
2250	2539	2970	3350


<p>2 ROUND POLE DATA ADDED 1 DRAWING SPLIT INTO TWO SHEETS 0 ISSUED FOR CONSTRUCTION</p>						C.C. A.S.	SEP'11 APR'07	A.T. R.S.	S.C. S.C.	DES M. BOCK	POWER STANDARD DRAWING			
											NO	DESCRIPTION	DRN	DATE
AMENDMENTS						DESIGN DATA BOLTED POLES CROSSARM & FOUNDATION STRENGTHS			DRAFTING STANDARD TO A.S.1100	CAD PRODUCT - DO NOT AMEND MANUALLY				
														

### CROSSARM STRENGTHS AND DEFLECTION

CROSSARM DATA			CROSSARM STRENGTH	DEFLECTION
CROSSARM TYPE	STOCK CODE	MATERIAL SECTION (mm)	MAX. PERMISSIBLE FORCE AT THE END OF CROSSARM (kN)	DEFLECTION AT MAX. FORCE (mm)
			STRONG DIRECTION	
HV - TRUNCATED DEVIATION	298513	125 x 75 x 4 RHS DURAGAL	5.5	12.4
HV - LINE T - OFF	298802	125 x 75 x 4	6.3	7.2
	298521	125 x 75 x 5 RHS DURAGAL	7.2	6.1
LV - LINE 4 WIRE	298562	125 x 65 x 4 CC DURAGAL	8.9	6.4
LV - TRUNCATED DEVIATION	298570	150 x 75 x 5 CC DURAGAL	5.5	8.1
LV - TERMINATION 4 WIRE	298588	150 x 75 x 5 CC DURAGAL	8.9	3.1
LV - TRANSPOSITION & CABLE TERMINATION	298604	150 x 75 x 5 CC DURAGAL	5.8	7.3

#### NOTES:

- SOIL RUPTURE INTENSITY - THE WORST EXPECTED CONDITIONS SHOULD BE USED WHEN ESTIMATING THE STRENGTH OF POLE FOOTINGS FOR SOILS WHICH ARE DEFINED AS FOLLOWS:-
  - \* SOIL GROUP 1(GOOD BEARING 300kPa/M)WELL COMPACTED ROCK SOIL. HARD CLAY AND WELL BONDED SAND AND GRAVEL WITH GOOD SURFACE WATER DRAINAGE AND FOOTING NORMALLY ABOVE WATERTABLE.
  - \* SOIL GROUP 2(MED. BEARING 200kPa/M)COMPACT MEDIUM CLAY. WELL BONDED SANDY LOAM. BONDED SAND AND GRAVEL WITH REASONABLE SURFACE WATER DRAINAGE.
  - \* SOIL GROUP 3(POOR BEARING 100kPa/M)SOFT CLAY. POOR COMPACTED SAND AND SOILS THAT TEND TO ABSORB LARGE AMOUNTS OF WATER, PROVIDED THESE DO NOT DEVELOP INTO SLUSH.
- MAXIMUM PERMISSIBLE POLE TOP FORCE EQUALS 50% OF PERMANENT DEFORMING FORCE (DOES NOT INCLUDE WIND LOADING ON POLE).
- REFER DRAWING S1-4-1-17 FOR USE OF STAYS WHERE DESIGN POLE TOP LOADING EXCEEDS FOOTING OR POLE STRENGTH, AND FOR POLE WIND LOADS.
- 1583 MPa WIND LOADING IS TO BE USED WITHIN 50km OF COASTLINE.FOR OTHER REGIONS USE WIND LOAD OF 1200 MPa.

						DES	M. BOCK	POWER STANDARD DRAWING			
						DRN	A. SCHMID	DESIGN DATA BOLTED POLES CROSSARM & FOUNDATION STRENGTHS			
						CKD	M. BOCK				
						APPD	-	DRAWING S01-4-1-21 NUMBER sheet 2 of 2			
						SCALE	NO SCALE				
						ISSUED	AUG'02	A3	DRAWING S01-4-1-21 NUMBER sheet 2 of 2		AMDT
						ALL DIM. IN mm					
						DRAFTING STANDARD TO A.S.1100			CAD PRODUCT - DO NOT AMEND MANUALLY		
											
1	DRAWING SPLIT INTO TWO SHEETS	A.S.	APR'07	R.S.	S.C.						
0	ISSUED FOR CONSTRUCTION	A.S.	SEPT'02	M.B.	M.B.						
NO	DESCRIPTION	DRN	DATE	CKD	APPD						
AMENDMENTS											