DOUBLE REDUCTION GEARBOX

21.05.13			FIRST STAGE		SECOND STAGE	
	RATIO 450:1		WHEEL	WORM	WHEEL	WORM
1	Z		30	2	30	1
2	Ratio		15		30	
3	m		2.5	2.5	5.5	5.5
4	d		75	30	165	66
5	Diameter Factor	q		12		12
6	C.D.		52.5		115.5	
7	Lead			15.71		17.28
8	Lead AngleRad	λ		0.17		0.08
9	Lead Angle	Degree		9.46		4.76
10	THROAT DIA		80	-	176	-
11	O.D.		82.5	35.00	181.5	77.00
12	ROOT DIA		68.75	23.75	151.25	52.25
13	THROAT RAD.		12.5	-	27.5	-
14	FACE WIDTH		22.5	30	49.5	30
15	RPM		100.0	1500	3.33	100.0
16	Linear Velocity -v	Mtr/Sec	0.3927		0.0288	
17	Linear Velocity -V	Mtr/Min	23.5619		1.7279	
18	Coeff. Of Friction	μ	0.06		0.20	
19	Strength	So	150		150	
20	FORM FACTOR	y	0.389		0.429	
21	F.S.		3282.19		17519.29	
22	WEAR FACTOR	N/MM²	0.88		0.88	
23	F.W.		1485		7187.4	
24	Kt		1.065		1.005	
25	Mx. Power Output	WATTS	1209.735		502.109	
26	Power Input	WATTS	1661.858		1736.107	
27	Max. Torque	N-Mtr.	115.521	0.256	1438.437	1.166
28	Min. Sft.Dia.		22.745	2.963	52.719	4.915
29	Efficiency		0.728		0.289	
30	HEAT GENERATED	WATTS	452.123		1233.997	
31	EFFECTIVE AREA	A	958.665		3662.566	
32	TEMP RISE	Δt - ℃	0.726		0.518	
	Bearing Design					
33		Pt.	3080.56	662.78	17435.60	2321.40
34		Pr.	1121.35	1121.35	6346.71	6346.71
35		Pa.	662.78	3080.56	2321.40	17435.60
36		Fa	662.78	3080.56	2321.40	17435.60
37		Fr	3278.31	1302.58	18554.81	6757.93
38		Fresult	3344.64	3344.64	18699.46	18699.46
39		Fa/Fr	0.202	2.365	0.125	2.580
	EXPECTED LIFE	Li	180	2700	6	180

BEARING		6206	30207	30210	32208
	C	19500	48400	70400	70400
	C_o	10000	32500	52000	50000
	Fa/C_o	0.07	0.09	0.04	0.35
	X	1	1	1	0.4
	Y	0	0	0	1.6
	e	0.27	0.37	0.37	0.37
SERVICE FACTOR	**S**	1.5	1.5	1.5	1.5
EQUIVALENT LOAD	**P**	4917.46	1953.87	27832.22	45900.21
	k	3	3.33	3.33	3.33
	L	1146.71	4972.66	3257.42	2812.08
REMARK		OK	OK	OK	OK
	I.D.	30	35	50	40
	O.D.	62	72	90	80
	THK.	16	18.75	21.75	19.75