



# TEST REPORT

of : SIGMA SEARCH LIGHTS LIMITED  
on ) P-27, SAGAR MANNA ROAD  
CALCUTTA - 700060  
W.B.

i) Item : 14 METER TOWER  
ii) Make : SIGMA  
iii) Model : -  
iv) Sl.No.: -



**ELECTRONICS REGIONAL TEST LABORATORY (EAST)**  
GOVERNMENT OF INDIA  
MINISTRY OF COMMUNICATIONS & INFORMATION TECHNOLOGY  
DEPARTMENT OF INFORMATION TECHNOLOGY  
STANDARDISATION TESTING & QUALITY CERTIFICATION DIRECTORATE  
BLOCK-DN, SECTOR-V, SALT LAKE CITY  
KOLKATA-700 091

ELECTRONICS REGIONAL TEST LAB ( EAST )  
BLOCK - DN , SECTOR - V , SALT LAKE , KOLKATA - 700 091

TEST REPORT ON : 14 METER TOWER : PAGE : OF  
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- 1.0 Scope :
- 1.1 Service Request No. : TE/0044/12-02
- 1.2 Test Report No. : ERTL(E)/TES/S208/0025/12-02
- 1.3 Requested by : SIGMA SEARCH LIGHTS LIMITED  
( Name & Address of P-27, SAGAR MANNA ROAD  
the organisation ) CALCUTTA - 700060  
W.B
- 1.4 Description, i) Item : 14 METER TOWER  
identification ii) Make : SIGMA  
of the item iii) Model : -  
to be tested iv) Sl.No.: -  
v) Qty. : 1
- 1.4.1 Applicable specification :  
of item (s) tested
- 1.4.2 Characterisation (i) Characterisation : Not applicable /  
and condition of the item (ii) Condition : Satisfactory /
- 1.5 Date of item received : 11/12/2002
- 1.6 Date of completion of testing : 29/01/2003
- 1.7 Location where testing performed : On site
- 1.8 Ambient conditions during measurements : 25 +/- 1.5 Deg. C  
70% RH. Max.
- 1.9 Specification used for testing : AS PER IS875, PART-3, 1987
- 1.9.1 Details of non-standard method followed (if any ) : NIL

ELECTRONICS REGIONAL TEST LABORATORY (EAST) BLOCK DN, SECTOR-V. SALT LAKE CALCUTTA-700091					TEST REPORT NO.: ERTL(E)/TES/S208/0025/12-02		
TEST REPORT ON : TEST REPORT ON 14 METER SKID BASED TILTING TYPE TOWER WITH EIGHT LIGHTS.					PAGE 2	TO 3	
<b>TEST RESULTS :</b>							
SL. NO	TEST OR ENVIRONMENT	CLAUSE NO.	QUANTITY		SPECS. LIMIT	RESULTS	NOTES
			TESTED	FAILED			
1	Mechanical strength test	As per IS 875 Pt-3	01	0	There shall be no physical damage / permanent deformation.	Complied Max. deflection : 0.62'	Four luminaires were placed 180' opposite to each other. Test report valid for this orientation only.  Drg.No.14MT/002 Enclosed.  Detail as per Annex -A

**Annexure — A**

1. The type of tested tower. : 14 metre long, skid based, Tilting type with 8 lights.
2. The name and address of the Tower Manufacturer : M/s Sigma Search Lights Limited,  
P 27, Sagar Manna Road,  
Kolkata - 700060.
3. The name and address of the client : M/s Sigma Search Lights Limited,  
P 27, Sagar Manna Road,  
Kolkata - 700060.
4. The dates and location of testing : 24.01.2003 At Site at Calcutta
5. Type of Test : Mechanical Strength
- 6.1 Specification / Standards followed : IS 6533 (Part 2) 1989, IS 800 1984  
and IS 875 Part 3(1987) as amended upto date.
- 6.2 Parameters considered :
  - Regional basic Wind speed : 50 m/sec (180 km /hr )
  - Gust Factor : 1.15
  - Topography configuration factor : 1.3
  - Mean probable design life : 25 years ( factor 0.9 )
  - Height of the Towers : 14 meter
  - Height Variation factor : As per IS Code 875:1987 (Part 3)
  - Terrain Category : Category 1 Class A as per IS 875  
( 0-10m = 1.05 and 10 -14m = 1.09 )
- 6.3 Number of lights considered : 4 Nos of 460mm dia facing in one direction.
7. The names of persons present during the tests. :
  1. Shri D. Biswas  
Joint Director  
Electronic Regional Test Laboratory (East)  
Kolkata.
  2. R.K.Bhandari  
Sigma Search Lights Limited,  
P -27 Sagar Manna Road,  
Kolkata - 700060.
  3. E.D'Souza ,  
Sigma Search Lights Limited,  
300 Rai Bahadur Road,  
Kolkata - 700053.
8. A list of various assembly and shop drawings relating to the tower tested, including any modification of the drawings referred to. : Drg No.14MT/002



- |    |   |  |
|----|---|--|
| 9  | A dimensioned line diagram of the tower showing the various load points and directions of loading to be applied and table with the specified loads  | Drawing No. TTA/003 held with the laboratory                   |
| 10 | Diagram showing the rigging arrangement used to apply the test loads  | Drg no TTA/003 held with the laboratory                        |
| 11 | Brief description of the test facility including the number, location, range and calibration charts or tables of every load transducer) as well as the accuracy of the equipment used to measure the test loads   | Loads used are certified by the weights & measures department. |
| 12 | One table per test, showing the loads required at the various points on the structure and for the various loading steps.  | Details held with the laboratory                               |
| 13 | One table per test, showing the various deflections which may have been recorded  |  |
| 14 | In case of failure<br>a. a table showing the maximum loads applied to the structure just before the collapse,<br>b. a brief description of the failure, and the dimensional and mechanical characteristics of the failed elements<br>c. A certain number of photographs, showing the whole of the structure and, possibly, details of the failure | Not applicable   |
| 15 | Certified steel producer test reports and physical test reports for members used in test towers shall be furnished as specified by the purchaser  | Not applicable   |



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TEST REPORT NO. : ERTL(E)/TES/S208/0025/12-02

3.0 Remarks (if any) :

NIL

Checked by

*[Handwritten signature]*  
30/1/03

(signature & date)

Released by

*[Handwritten signature]*  
30.1.03

(signature & date)

SCIENTIST-P  
E. R. T. (14087)

Ministry of Communications & Information Technology  
SALT LAKE  
KOLKATA-700 091