



Bharat Heavy Electricals Limited

(A Govt. Of India Undertaking)

Power Sector, Eastern Region

BHEL BHAWAN, PLOT NO. DJ-9/1 , SECOTR II , SALT LAKE CITY ,
KOLKATA

WEST BENGAL, INDIA

Phone : 033-23216130-31,033-23216130 FAX : 033-23211960

Sub	TENDER CHANGE NOTICE TCN-01 DATED: 16.01.2014
Job	Supply installation & commissioning of SLI system for TATAHITACHI MAKE, 100 MT KH500 crane at BHEL IOCL PARADIP Site.
Ref	Tender enquiry no. PSER:PUR:FEX :142 (III):126 Dtd.8/01/14

WITH REFERENCE TO ABOVE, FOLLOWING POINT, RELEVANT TO TENDER, MAY PLEASE BE NOTED AND COMPLIED WITH WHILE SUBMITTING OFFER

SL NO.	BIDDER'S QUERY	BHEL'S CLARIFICATION
1.	LOAD CHART SOLICITED FOR TATA HITACHI MAKE, 100 MT KH500 CRANE FOR MAIN HOOK AS WELL AS AUX HOOK AT BHEL IOCL PARADIP SITE.	KINDLY FIND APPENDED THE SOLICITED INFORMATION IN THE FOLLOWING ANNEXURE- I.

ALL OTHER TERMS & CONDITIONS OF THE ABOVE TENDER SHALL REMAIN UNCHANGED.ALL BIDDER'S ARE REQUESTED TO ACKNOWLEDGE THIS TCN-01 IN THEIR TECHNO- COMMERCIAL OFFER.

Sr.Engineer/ Pur

ANNEXURE-I

1. SPECIFICATIONS AND DIMENSIONS

1.1 Specifications

Type	Tata-Hitachi KH500 Crawler Crane
Lifting capacity	100,000kg
Crane capacity	530,000kg.m
Rated load × working radius	100,000kg × 5.3 m

	Type	Crane with hook	Clamshell
	Item		
	Boom length (m)	16 ~ 70 (3m sections)	16, 19, 22, 25
	Jib length (m)	9, 13.5, 18	-
	Boom + Jib (max.) (m)	61 + 18 = 79	-
	Boom angle (°)	30 ~ 80	35 ~ 65
	Bucket capacity (m ³)	-	2.5 (Medium type)
OPERATING SPEEDS	* Rope speeds		
	Hoist (m/min)	High: 60, Low: 30	-
	Lower (m/min)	High: 60, Low: 30	-
	Opening/closing (m/min)	-	High: 60, Low: 30
	Holding (m/min)	-	High: 60, Low: 30
	Boom hoist (m/min)	40	
	Boom lower (m/min)	40	
	Swing rpm	High: 2.2, Low: 1.5	
	* Propel km/hr	High: 1.20, Low: 0.60	
	Gradeability %	30% (climb with base boom and cab placed at the rear)	
	Engine rated output	Kirloskar Cummins NT855C, 250 PS @ 1950 rpm @ 2000 rpm	
	Crane gross weight kg	99,000 (with base boom and 100,000kg capacity hook)	
	Ground pressure	0.76bar (0.76kgf/cm ²) (with base boom and 100,000kg capacity hook)	
	Counterweight	30,000kg (4 pieces)	

NOTE: (1) * ... Speed may vary with load. (without lowering of Main/aux. hook, boom)

(2) The rope speeds are calculated on bare drum.

ANNEXURE-I

KH 500 RATED LOADS FOR MAIN BOOM (TUBULAR)

UP TO 1000 kg

Ch. No. / Im. Lth. (m)	16.0	19.0	22.0	25.0	28.0	31.0	34.0	37.0	40.0	43.0	46.0	49.0	52.0	55.0	58.0	61.0	64.0	67.0	70.0
4.5	100000																		
5.0	100000	100000	83000	65K															
5.6	76000	76000	76000	61K	62K														
7.0	59000	59000	59000	59000	59000	71K	76K												
8.0	48000	48000	48000	48000	48000	48000	48000	81K	87K										
9.0	41000	40000	40000	40000	40000	40000	40000	38000	38000	92K	97K								
10.0	35000	35000	34000	34000	34000	34000	34000	34000	34000	30000	29000	19.5K	20.5K						
12.0	27000	27000	27000	27000	26000	26000	26000	26000	26000	26000	26000	24000	24000	20000	20000	19000	18000	17000	16000
14.0	22000	22000	22000	22000	22000	21000	21000	21000	21000	21000	21000	21000	21000	21000	21000	21000	21000	21000	21000
16.0	18000	18000	18000	18000	18000	18000	18000	18000	18000	18000	18000	18000	18000	18000	18000	18000	18000	18000	18000
18.0	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000
20.0	13000	13000	13000	13000	13000	13000	13000	13000	13000	13000	13000	13000	13000	13000	13000	13000	13000	13000	13000
22.0	11000	11000	11000	11000	11000	11000	11000	11000	11000	11000	11000	11000	11000	11000	11000	11000	11000	11000	11000
24.0	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000
26.0	9000	9000	9000	9000	9000	9000	9000	9000	9000	9000	9000	9000	9000	9000	9000	9000	9000	9000	9000
28.0	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000
30.0	7000	7000	7000	7000	7000	7000	7000	7000	7000	7000	7000	7000	7000	7000	7000	7000	7000	7000	7000
32.0	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000
34.0	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
36.0	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000
38.0	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
40.0	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
42.0	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
44.0	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
46.0	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800
48.0	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
50.0	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
52.0	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
Ch. No. / Im. Lth. (m)	16.0	19.0	22.0	25.0	28.0	31.0	34.0	37.0	40.0	43.0	46.0	49.0	52.0	55.0	58.0	61.0	64.0	67.0	70.0

- Notes:
- The rated loads are determined according to PCSA and do not exceed 75% of tipping load on condition that the machine is stationed on firm, level ground.
 - The rated loads shown include the weights of all lifting attachments, such as hook and bucket. The load to be actually lifted is the rated load minus the weight of all lifting attachments.
 - The loads marked by $\frac{1}{2}$ are based upon structural limitation of the machine.
 - When the jib or auxiliary jib is attached, the load to be actually lifted is the rated load minus the weight listed below.

Hook capacity (t)	Hook weight (t)	Maximum rated Loads (t)									
		Rope reeving (Part Line)									
100	1.40	100	90	80	70	60	50	40	30	20	10
60	0.95	60	50	40	30	20	10				
25	0.73	25	20	15	10						
9	0.37	9									

Jib length (m)	9	13.5	18	Aux. jib
Weight to be reduced	1.1	1.4	1.7	0.3

ANNEXURE-I

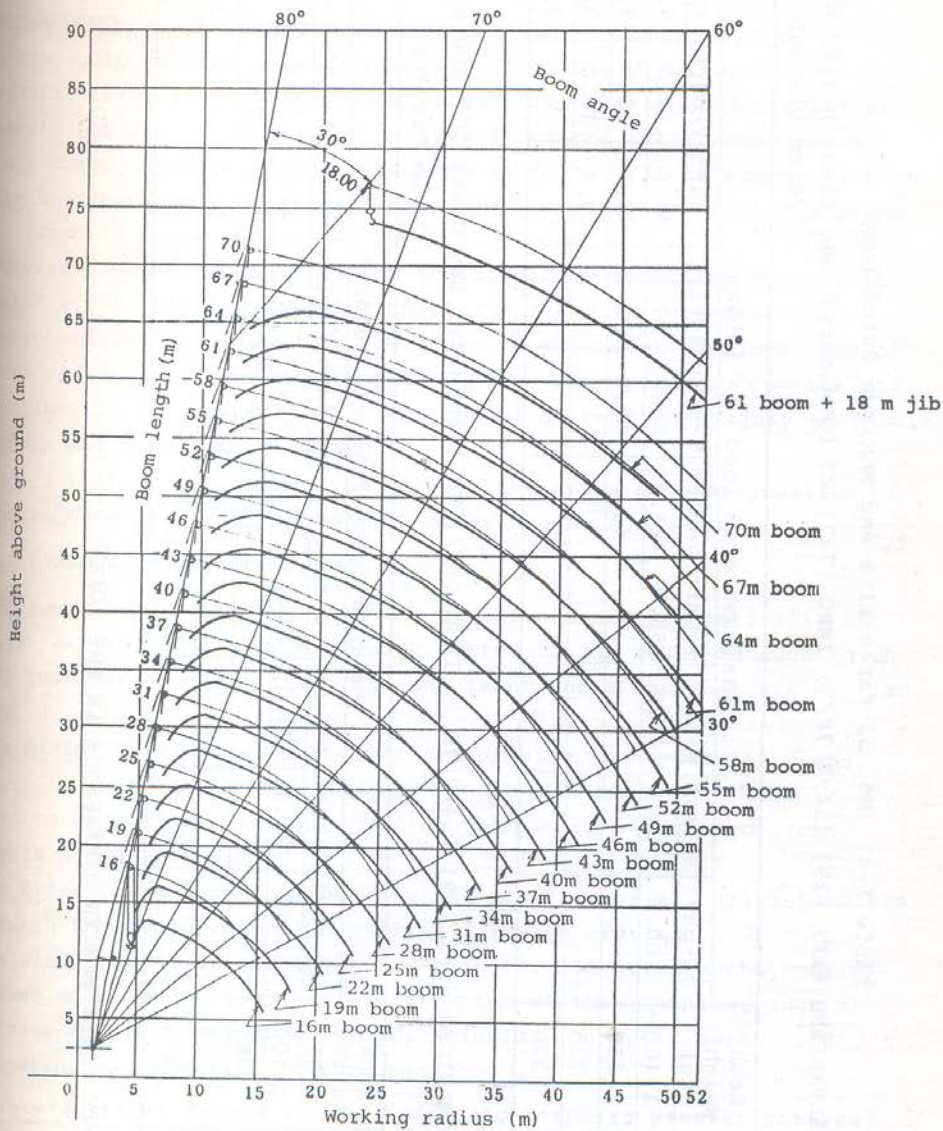


Fig. 1-3 KH500 Crawler Crane Working Range