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Tender No: NHM/PROC/DDWH/Racking/3089/2016-17/709

Date:11/04/2017

**CORRIGENDUM No.1**

**e-TENDER FOR ENTERING INTO RATE CONTRACT FOR SUPPLY AND INSTALLATION OF TWO TIER HEAVY DUTY STORAGE RACKING SYSTEM**

This has reference to the e-tender No: NHM Tender No: NHM/PROC/DDWH/Racking/3089/2016-17/ 22243 Date: 18/03/2017 for entering into rate contract for "Supply and installation of Two Tier Heavy Duty Racking System". The following clarification may be taken note of prior to submission of Bids:

1. **Sub-clause A under Clause No.12: "ACCEPTANCE OF TENDER" is clarified to read as follows:**

A. **Tender Evaluation**

Tenders will be evaluated with reference to technical and commercial parameters to determine the technically qualified bidders.

Price Bids of technically qualified bidders will be evaluated with reference to the quoted rates (landed price of each item). Conditional discounts shall not be taken into account for price comparison. Basic Price quoted by a bidder will be taken into account for calculating the Lowest price.

2. **Annexure XII "Technical cum Compliance Specification Sheet" is clarified to read as follows:**

**ANNEXURE XII (Revised)**

**Technical cum Compliance Specification Sheet: (TO BE SUBMITTED BY THE MANUFACTURER)**

**Item: Two Tier Heavy Duty Storage Racking System.**

Sr. no.	Feature	Details	Technical Specification quoted by bidder	Deviation (if any)
1	<b>Purpose of Racking System:</b>	It is a manual picking shelving system suitable for storing medium to heavy loads i.e. the goods which are easily handled & lifted by man are stored in these systems.		

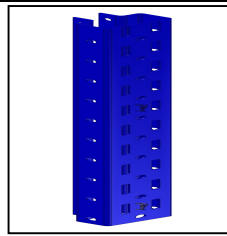
2	<b>Technical Specification/Construction:</b>	<p><b>RAW MATERIALS-</b></p> <p>Load bearing members of the system are made out of high strength HR steel having properties equivalent to grades specified by IS 5986:2002 / IS 2062:2006</p> <p>In addition to high strength, the raw material used for structural load bearing members must possess adequate ductility, to ensure toughness. The material should have the necessary impact strength for cold room applications up to -30 deg C.</p> <p><b>FASTENERS-</b></p> <p>All bolts and nuts to be in rust Free condition , so nuts and bolts should be galvanized</p> <p><b>SURFACE FINISH-</b></p> <p>For long life and protection from corrosion, All Powder coated components are given a thorough anti-rust treatment. The dry film thickness (DFT) after powder coating would be on an average 35 microns.</p> <p>All powder coated components are subjected to an elaborate 4 step, six zone anti corrosion treatment, viz. De-greasing as per IS 6005:1970, rinsing, phosphating as per IS 3618:1966 and RO water rinsing.</p> <p><b>ASSEMBLY &amp; INSTALLATION-</b></p> <p><b>Shelving components specifications-</b></p> <p>The shelving system is completely knock down construction. The racks are grouted on the floor using expansion bolts. No welding will be carried out at site .</p>		
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**UPRIGHTS-**

Upright should be roll formed which is made in single piece without welding. Upright should have slots at 50 mm to enables its optimum usages .

Uprights should be designed to offer maximum load bearing capacity with optimum surface utilization ensuring high standards of stability and safety. Uprights should be bolted with base plates to transfer the load to ground.

Uprighttype	GL
Profile	"T" profile
Profilewidth	55mm
Profiledepth	45mm
Numberofbend	6nos
Beamadjustability	50mm
MaterialQuality	Min Ys= 355 Mpa
Mfg process	Roll forming
Finish	Powder coated
Colour	Oxford Blue

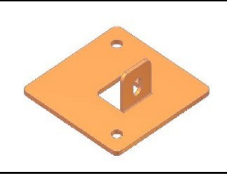


"T" profile

**BASE PLATE-**

It is a formed construction bolted to upright. They should anchored to ground using M8x75 torque type mechanical anchor bolts. Floor level variation shall be adjusted with shims.

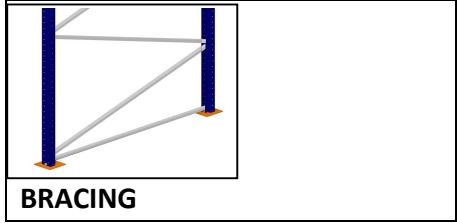
Width	100mm
Depth	100mm

Connectivity	Grouting
No of exp bolt	2 no of M8X75
No of fasteners to connect	1 no of M8X20
Mfg process	Press forming
Finish	Powder coated
Colour	Orange
	
<b>BASE PLATE</b>	

**BRACING-**

These are to connect uprights to make frames.

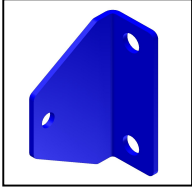
Type of profile	Lipped Channel
Profile section	20X25X6 mm
Mfg process	Roll forming
No of bend	4 nos
Connectivity	Bolted
No of fasteners	2 no of M6X30
Surface finish	Galvanized
Colour	Galvanized



**BRACING CLEAT-**

Bracing cleat should be used to connect the horizontal bracing directly to the upright front face to avoid the no. of frames

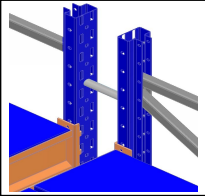
Type of profile	Channel
Mfg Process	Welding
No of bend	4 nos
Fixity	Bolted


No of Fasteners	2 no of M8X 20
Surface finish	Powder coated
Colour	Oxford Blue
	
<b>BRACING CLEAT</b>	

**ROW CONNECTORS-**

Row connectors which are to be connected back to back frames

Type of profile	Pipe
Dia	17mm
Material thickness	2mm
Connectivity	Bolted
Fasteners	1 no of M8X75/125
Surface finish	Galvanized
Colour	Oxford Blue






**ROW CONNECTORS**

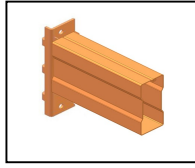
**BEAM-GZ**

Beams are of horizontal members connecting two frames that support the decking panels. Beam locks by locking pins or locking clips that ensure beams are engaged with uprights precisely and prevent any accidental beam dislodgement due to handling.

Type of profile	"Z" Profile
Usage	For supporting decking panel
Height	95 cm
Width	30 mm
Type of lip connector	3 Lip
Mfg process	Roll forming & welding
No of bend	8 nos
Locking mechanism	L shape locking pin/Clips
Dia of locking pin	Dia 6 mm
Tie bracket	Yes
No of the bracket/level	One
Surface finish	Powder coated
Colour	Orange
	
<b>BEAM-GZ</b>	

**BEAM-GHEMLS**

Type of profile	Hem Profile
Usage	For supporting decking panel
Height	100 cm
Width	50 mm
Type of lip connector	3 Lip
Mfg process	Roll forming & welding
No of bend	8 nos
Locking mechanism	L shape locking pin/Clips
Dia of locking pin	Dia 6 mm
Tie bracket	Yes
No of the bracket/level	One
Surface finish	Powder coated

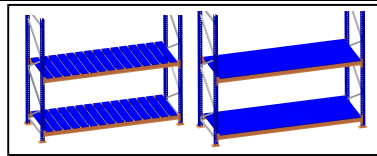


**BEAM-GHEMLS**

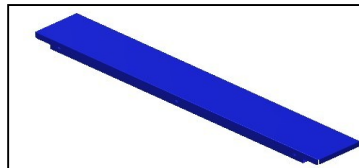
**BEND DECKING PANEL-HD**

Bend decking panels should have 6 bends. Both ends of the panel should have notches facilitating the seating of panel on the beam.

Width	200 mm
Height	40 mm
No of Bend	6 nos
Sharp Edges	No sharp edges in loading side
Mfg process	Press formed/Roll forming
Gap between Panel	0mm
Connectivity	Interconnected
Fasteners	Panel connector
Surface finish	Powder coated/Galvanized
Colour	Oxford Blue

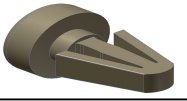


**BEND DECKING PANEL-HD**



**PANEL CONNECTORS**

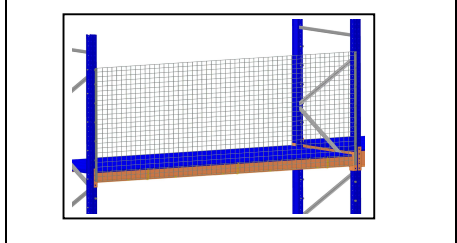
It is the plastic connector used to inter-connect two panels without gap. It should be self-locking type.

Material	Plastic
Usage	Interconnecting Panel
Qty per panel	2 nos
Length	32 mm
Colour	Black
	
<b>PANEL CONNECTORS</b>	

**REAR MESH CLADDING:**

These mesh cladding prevent the fall of small item in the free space behind the unit. The general arrangement is as follows:

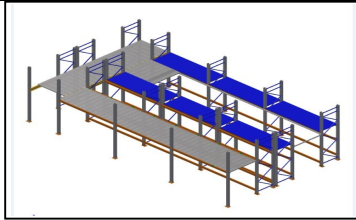
Type of profile	Mesh
<b>Mesh size</b>	50x50 mm
Dia	4mm
<b>Construction</b>	Strips on either side
Mfg process	Welding
Fixity	Bolted to upright
Fasteners	M8X30
Surface finish	Powder coated
Colour	Oxford Blue



**WALKWAY ASSEMBLY-**

Walkway assembly facilitates man and hand pallet truck (HPT) or Trolley movement.



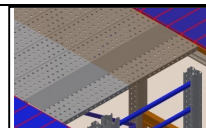
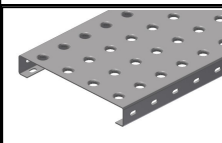


**WALKWAY ASSEMBLY**

**Walkway Panel-Hole -**

Walkway panel are designed to offer maximum load bearing capacity with high standards of stability and safety. Height of panel should be 45mm & it has side slots for inter-bolting and slots at lips for bolting to the walkway beam.

Catwalk material	Steel
Width of panel	200mm
Type	Hole
Mfg process	Roll forming
Support member	Channel member / Joist tube
Panel Clamp	2Nos / Panel
Pitch of support member	Max. 1500mm
Connectivity	Inter Bolting at 500mm pitch
Fastener	M8x30 Hex bolt & Nut
Max Load capacity	300 to 600 Kg/m <sup>2</sup> UDL
Trolley Load	100 to 600 kg
Surface finish	Galvanized ( 275 GSM)
Colour	Oxford Blue



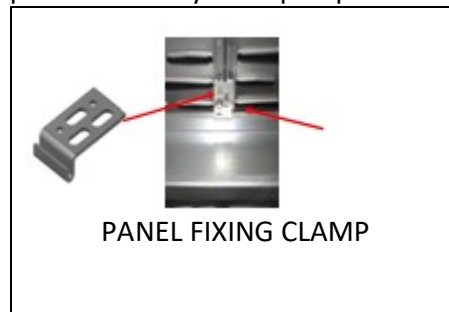
**WALKWAY GAP PANEL:**

Walkway gap panel is manufactured by bending operation. It is provided to fill the gap between walkway panels in an Aisle. It is generally installed at the end of the Aisle/junction of Picking or Cross Aisle. Height of the panel is 47mm & it has slots for bolting with the walkway panel.

Height	47
Mfgprocess	Punching &
Noofbends	2
Connectivity	Bolting
Surfacefinish	Galvanized(275GS M)
Colour	Galvanized

**PANEL FIXING CLAMP**

Panel fixing clamp connects picking aisle channel/frame channel and walkway panel by bolting the clamp with the walkway panel and it should be provided at any one lip of panel.

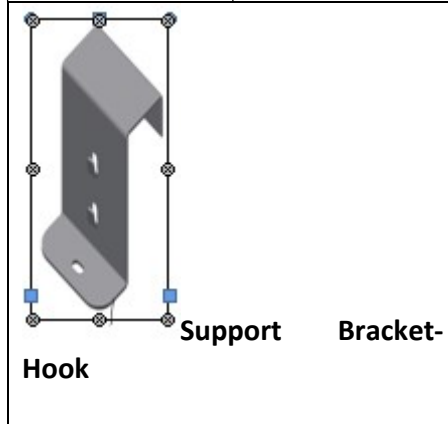


**Support Bracket-Hook**

Hook bracket is connected with picking Aisle channel by two lances provided on the bracket and M8 bolting at the bottom to avoid dislodging of bracket from Picking

Aisle channel which is Supported by walkway level Unit beam at predefined pitch.

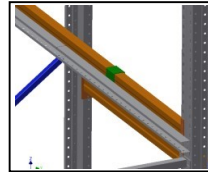
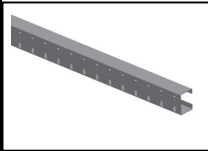
Profile Height	108X90
Flange Length	50
Lip Height	25
Mfg Process	Lacing, Piercing, Bending
No of bends	3
Connectivity	Hooking, Bolting
Surface Finish	Galvanized
Colour	Galvanized



**Picking Aisle Channel-**

Picking Aisle channel is Hooked to the support bracket, through the slot provided at its face and bolting at the bottom.

Section	Channel
Profile Height	60
Flange Length	50mm
Lip Height	25mm
Mfg Process	Piercing, Bending
No of bends	4
Connectivity	Hooking, Bolting
Surface Finish	Galvanized (120 GSM)
Colour	Galvanized

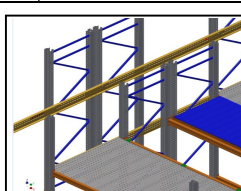
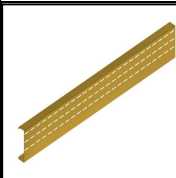


Picking Aisle Channel

**Frame Channel-**

Frame channel has 'C' lipped section with series of slots at 50mm pitch and standard length of 2425mm. This channel is bolted to the upright side holes in cross Aisle/Overhang cross Aisle.

Section	Channel
Profile Height	110mm
Thickness	1.6 mm
Mfg Process	Piercing, Bending
No of bends	4
Connectivity	Bolting
Surface Finish	Powder coating/Galvanized (120 GSM)
Colour	Galvanized



Frame Channel

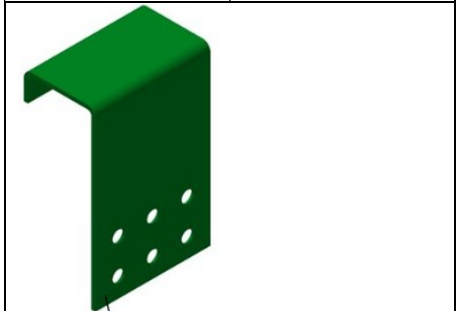
**Packing Aisle Support bracket hole-**

These Holes brackets are bolted with both sides of panel support beam - type1.

Supported by unit beam at picking Aisles/overhang Picking Aisles.

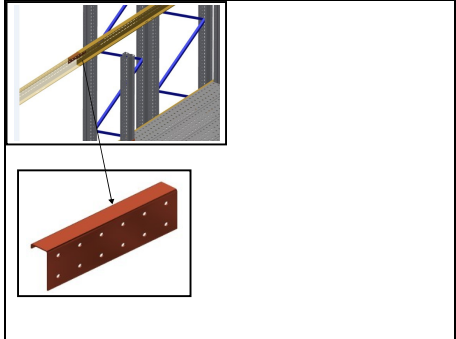
Profile Height	153
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Flange length	62
Mfg Process	Piercing, Bending
No of bends	2
Connectivity	Bolting
Surface Finish	Galvanized
Colour	Galvanized



**Frame Channel Splice-**  
It should be connected by M8bolts-12 nos. Channel splice is “L” type lipped profile.

Section	Channel
Mfg Process	Piercing, Bending
No of bends	2
Connectivity	Bolting
Surface Finish	Galvanized (120 GSM)
Colour	Galvanized



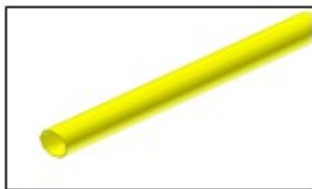
**Other catwalk components & safety members-**

**Railing-**It is the ERW pipe provided in

Overhang catwalks and end of the working aisle for safe walking. It is provided as three rows said to be a hand rail and knee rails.

Railing pipe should be bolted to the upright by railing clamp and open ends of the rails are blocked by Railing Cap. Up-to 6 meter length single pipe should be provided, beyond that joining should be provided. The dimensional position is shown below.

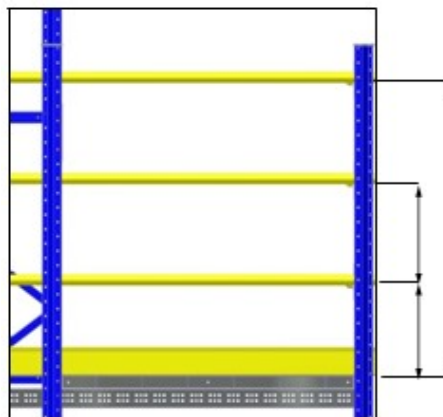
Size of railing pipe – Dia 38  
Height of rail-1200mm  
Connecting members-Railing clamp  
Surface finish-Powder coated  
Colour-Yellow



**Railing Pipe**

**Railing clamp-**

It is for fixing Railing pipe with the upright for catwalk safety. The plastic profile of the clamp has a hole for fixing railing pipe and slot on clamp is used to fix with upright.



**Railing Clamp**

**Railing cap.**

It is the end dummy cap provided at opening ends of railing pipe. It is a Plastic cap suitable for dia38 pipe.



Railing Cap

**Kick plate-**


It is the 'L' section, provided over the catwalk surface on both sides of aisle. This plate prevents the foot slip through the gap between knee rail and catwalk surface while walking. It is fixed using M5x25 self-tapping screw at 500mm pitch.

Material	Steel
Height	100 mm
Mfg Process	Press forming
No of bends	3 nos
Fastener	M5X25 at every 500mm pitch
Surface Finish	Powder coated
Colour	Yellow

**STAIRCASE**

Staircase is an independent, in-built unit with multi-tier system for reaching one floor to another floor (or) tier to tier. Specifications are listed below-

Overall size of Staircase	942(W) X 2400 (H)
Inclination	36 deg
No of tiers	2

		Steps	Anti-skid (embossed type)		
		Thickness of steps	2mm		
		Kickplate on steps	Yes		
		Step depth	275mm		
		Clear width	725mm		
		Step to step height	190mm		
		Rail Height	1200mm		
		Colour of Step	Yellow		
		Colour	Yellow		
					
		<b><u>STAIRCASE</u></b>			
3	<b>Capacity per level</b>	500kg udl			
<b>Standards</b>					
4	<b>Quality Certification</b>	CE/BIS/USFDA, ISO 9001:2008 certified.			
5	<b>Warranty</b>	3 years.			

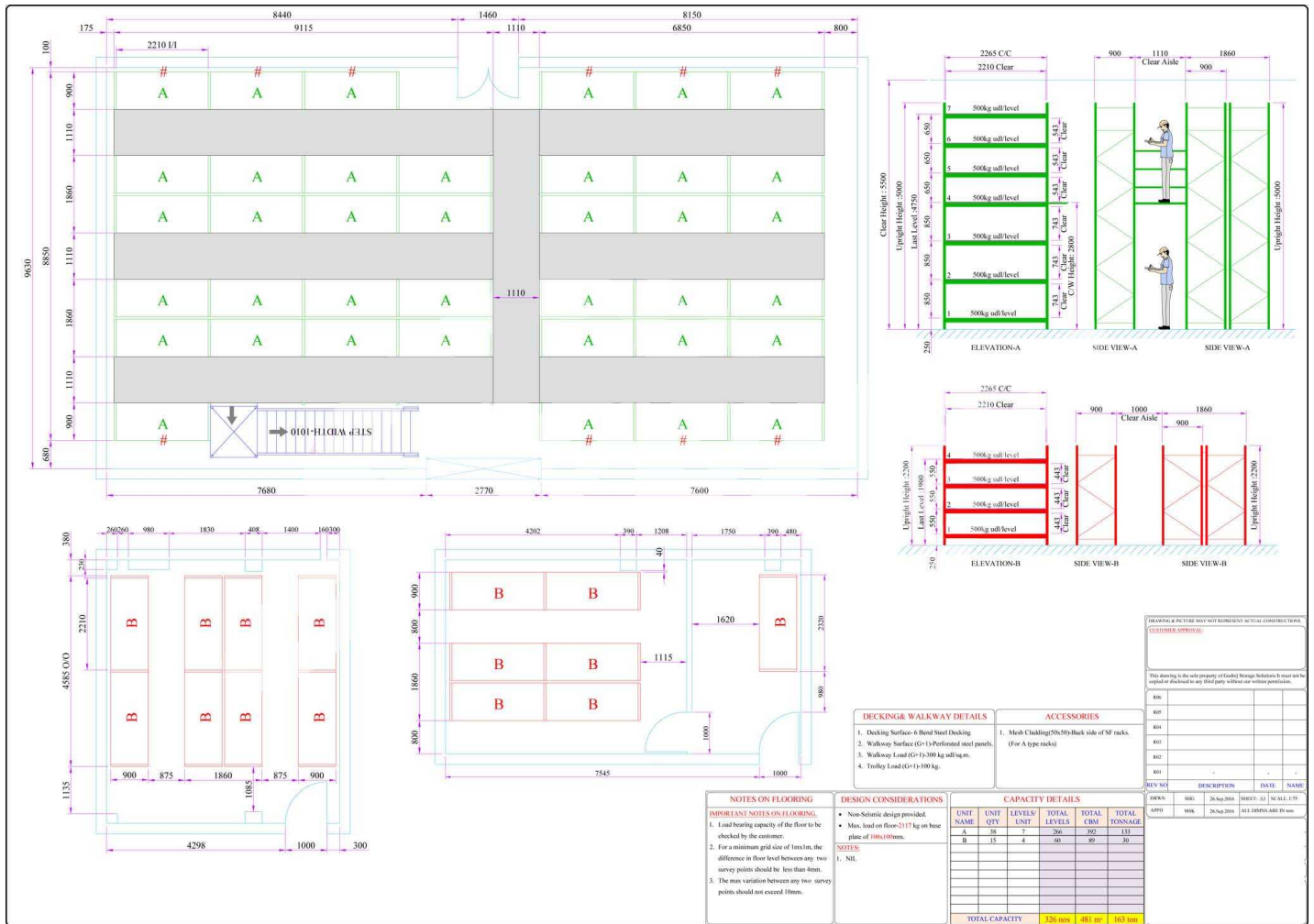
**A consolidated figure of the two tier heavy duty storage racking system is as follows:**



**Note:** The schematic drawing at Annexure XIV attached to this Corrigendum shows the layout and position of racks. It is proposed to install a two-tier racking system in the main storage hall, 16590 mm (L) X 9630 mm (B) only. Prospective bidders are required to quote for the complete racking structure in the main storage Hall only.



Annexure XIV



All other terms and conditions of the tender referred to above shall remain unchanged. The start and end date of bid submission is extended to **24/04/2017 from 10:00 AM** & **02/05/2017 up to 2:00 PM** respectively. Bids will be opened on **02/05/2017 at 3:30 PM**.

Sd/-  
Mission Director, NHM, Assam