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1st TED 24/WG-1 Meeting – Working Group for Wooden Pallets

MINUTES

Name of The Working Group	No. of Meeting	Date and Time	Day	Mode : Virtual
TED 24/WG-1 – Working Group for Wooden Pallets	**First (1st)**	**10th DEC 2024** from **2:30 PM** onwards	**Tuesday**	Webex

WORKING GROUP CONVENER: Shri Jitender Shah, Omega Industries
BIS SECRETARIAT: Shri Gaurav Jayaswal, Member Secretary, TED 24

ITEM 0 MEETING ATTENDANCE:

SL NO.	Organization	Members /Invitees	Present/ Absent	Representative Attended
1.	Central Warehousing Corporation of India, New Delhi	Member	Present	Dr Anurag Tripathi, GM (Technical)
2.	Food Corporation of India (FCI), New Delhi	Member	Present	Shri S Vijay Kumar, DGM (Purchase)
3.	Deekay Pine Board Private Limited, Gandhidham	Member	Present	Shri Naval Kedia
4.	Naman Enterprises	Member	Present	Shri Amit Vashisht
5.	Food, Civil Supplies and Consumer Affairs Department, Govt of Punjab	Invitee	Absent	-
6.	Western Regional Laboratory, BIS	Invitee	Absent	-

ITEM 1 DISCUSSION & DECISION IN THE WORKING GROUP MEETING

1.1 The Working group was tasked to examine the comments given by following parties regarding concerns related to IS 17427:2020:

I. Food, Civil Supplies and Consumer Affairs Department, Govt of Punjab (Received from Shri Puneet Goyal, Director)
II. Western Regional Laboratory, BIS
III. M/S Naman Enterprises

Shri Gaurav Jayaswal, Member secretary, TED 24 started the meeting with warm welcome to all parties.

1.2 The Convener began the task by selecting concern of Director Food Supplies. E-mail sent by Shri Puneet Goyal was quite informative and their concern about Pallet requirements was noted with utmost serious concern.

The discussion and recommendation of the working group on comments received from Food, Civil Supplies and Consumer Affairs Department, Govt of Punjab is as follows:

Sl No.	Title of Comment defined by Commenter	Clause / Subclause of IS 17427	Comment received	Discussion and Recommendation of Working Group
1.	**Classification of pallets**	**3.4 Dunnage Pallets** *"Dunnage pallets are mainly used in storage purpose in warehouse/godowns for stacking of packaged commodity goods in flexible bags made of either jute fabric or plastic woven sacks for providing the protection against the floor moisture and bio degradation and forth aeration of stored items over the pallets."*	From this it is clear that our requirement is of dunnage pallets, however the board category is only expendable and non-expendable as specified in section 6 (Quality characteristic of timber pallets). The quality characteristics for each type of pallets must be spelt out in standard for proper clarity on specification.	The WG Members concluded that Dunnage Pallets are classified under Non expendable Pallets as it is repetitively used and all the para related to Non expendable pallet is applicable to Dunnage Pallets except few tests that are not applicable (*For Storage Purposes*) are defined in IS 17427:2020.

2.	**Size of pallets**	**10 RECOMMENDED DIMENSIONS OF PALLETS** Depending upon the usage, the following standard dimensions of wooden pallets either Non-Expandable or Expandable should be used by the Indian companies: *Sl No.* — *Dimensions* (mm) $L \times W \times H$ i) 1 000 × 1 200 × 145 ii) 1 100 × 1 100 × 145 iii) 800 × 1 200 × 145 iv) 1 300 × 1 100 × 150 v) 1 200 × 1 200 × 150 vi) 1 000 × 1 000 × 140 vii) 800 × 800 × 140 viii) 1 200 × 1 800 × 200 ix) 1 500 × 600 × 130 (For storage only). x) 1 500 × 900 × 130 (For storage only). xi) 1 200 × 1 200 × 140 In addition, any other dimensions can be finalized between the buyer and the seller for domestic and export market	The point no 10 specifies the dimension for pallets for storage purpose marked under Sr no. IX and X (Dimensions in mm- l*w*h) (ix) 1500*600*130 (x) 1500*900*130 However as per para no. 10.2, the height of pallet and height of loaded pallet is as follows "*In case of storage pallet for foodgrain height of pallet shall be minimum 145mm for stringer plus 35mm for planks.* *In case of perimeter base or heavy duty pallet height of pallet of 200 mm maximum*" As such there is contradiction in the standard	The matter was discussed by the working group members and it was concluded that Lines mentioned in para 10.2 (*In case of storage pallet for foodgrain height of pallet shall be minimum 145mm for stringer plus 35mm for planks.* *In case of perimeter base or heavy duty pallet height of pallet of 200 mm maximum*) is meant for food grains Storage exclusively and dimensions mentioned at sl. No. ix) and x) of clause 10 {(ix) 1500*600*130 (x) 1500*900*130} is for general cargo Storage. Accordingly, it was concluded by WG members that the minimum Height for the Pallet which are intended for food grain storage is 180 mm. (*Minimum 145mm for stringer plus 35mm for planks.*) Additionally, It was also noted that any other

			itself about the height as mentioned in point 10 is 130 mm .However, as per 10.2 minimum height is 180mm.	dimensions other than the ones mentioned in the table under clause 10 can also be finalized between the buyer and the seller for domestic and export market.
3.	**Maximum working load**	-	Maximum working load has not prescribed for different size of pallet.	The working group members noted that IS 17427 is a performance based standard wherein user has to define their Working Load and IS 17427 recommends tests to be carried out and the minimum requirements to pass the tests in order to ascertain minimum quality requirements with utmost safety in use of product.
4.	**Thickness of planks/ stringers**	-	No method has been prescribed to calculate the required thickness w.r.t static/dynamic load to be placed on the pallet which is most necessary to know the	It was concluded by the working group that determining Thickness of planks or stringers is a part of Timber engineering design process .

			specifications of pallet.	The standard only prescribes minimum quality requirements along with tests to be carried out and the minimum requirements to pass the tests (based on working load defined by the user) in order to ascertain minimum quality requirements with utmost safety in use of product. The Internal Design (except for minimum design requirements like Minimum height) is left to the industry itself to achieve the most efficient pallet designs.
5.	**Marking of pallet**	**16 GUIDELINES FOR MARKING OF PALLETS** **16.1** There shall be 7 ratings (R) with appropriate codes as given below for through transit pallets: a) 250 kg : A b) 500 kg : B c) 750 kg : C d) 1 000 kg : D e) 1 250 kg : E f) 1 500 kg : F g) 1 750 kg : G	As per our requirement we need pallet with working load of 5000 Kg. However standard prescribed up to 1750 kg.	The working group discussed the issue in detail. It was noted that currently, Rating codes have only been defined up to 1750 Kgs in IS 17427:2020. However, members noted that the standard

				(IS 17427:2020) does not restrict users from specifying an R value exceeding 1750 kg, as the test-passing requirements are defined in terms of multiples of the R value and NOT as specific Load value. Consequently, the Working Group agreed to revise the wording of Clause **16.1** to allow marking on pallets for any load in multiples of 250 kg.
6.	**Sampling**	-	Though testing parameter has been provided in the standard but the sampling size for the lot size, sample size pallet to be inspected permissible no of defects, no. of pallets to be tested for each parameter need to be specify in the standard.	The working group noted that Sample size has been mentioned in the Product Manual of IS 17427:2020 issued by Central Marks Department at BIS.
7.	**Fasteners**	-	Different type of fasteners has been described in the standard	The working Group noted that all minimum requirement for

			but no criteria for selection and required number vis-à-vis payload /design have been provided.	fasteners have been covered in clause 8 of IS 17427:2020. It was also agreed that the selection of an appropriate fastener is a design consideration that should be addressed by the designer when designing the pallet based on the load rating, ensuring compliance with all minimum design requirements specified in the standard.

1.3 The Working Group then discussed the Concern of Western Regional Laboratory, BIS. The discussion and recommendation of the working group is as follows:

Sl No.	**Clause / Subclause No. of IS 17427**	**Comment received**	**Discussion and Recommendation of Working Group**
1.	Annex A, cl 3.2	'Immediately apply full test load is applied'. Definition/meaning of full test load has not been specified in the standard.	The WG noted that the Annex-A for 'Compression Tests for Blocks or Stringers' has been subsumed in Clause 8.3 of IS 6219:2024. IS 6219:2024 may be referred for definition of Datum load and Test Load. It was also recommended by the WG to issue an

			amendment to IS 17427:2020 to remove Annex A and referencing Clause 8.3 of IS 6219:2024 for 'Compression test' (Test Method) at Sl. No. 8 in Table for Tests under Clause 13 of IS 17427:2020.
2.	Annex B	Reference of annex Q is there in B-2; however there is no fig Q in this standard.	The WG noted that the Annex-B for 'FORK LIFTING TEST' has been subsumed in Clause 8.2 of IS 6219:2024. It was recommended by the WG to issue an amendment to IS 17427:2020 to remove Annex B and referencing Clause 8.2 of IS 6219:2024 for 'FORK LIFTING TEST ' (Test Method) at Sl. No. 9 in Table for Tests under Clause 13 of IS 17427:2020.
3.	Annex B, B-3.1	Meaning of test load may be clarified	IS 6219:2024 may be referred for definition of Datum load and Test Load.
4.	Fig 21 Last fig	The deflection point has been shown in point diagram, which is not giving clarity if the deflection has been shown in full pellet or half pallet as per first figure of the Fig 21. Meaning of '8' may be clarified in the second last figure.	The WG noted that the Annex-B for 'FORK LIFTING TEST' has been subsumed in Clause 8.2 of IS 6219:2024. It was recommended by the WG to issue an amendment to IS 17427:2020 to remove Annex B and referencing Clause 8.2 of IS 6219:2024 for 'FORK LIFTING TEST ' (Test Method) at Sl. No. 9 in Table for Tests under Clause 13 of IS 17427:2020.
5.	-	How to measure deflection safely, guidance may be provided.	The Working Group was unable to comprehend the specific query and requested the submitter to resubmit it with specific questions for clarity.

1.4 The Working Group then discussed the Concern of M/s Naman Enterprise. It was noted by the group that that the concern raised of M/s Naman Enterprises have already been addressed during the discussion on comments received from Shri Puneet Goyal.

1.5 During meeting it was noted by the members that test for determining moisture content of wood has not been prescribed in IS 17427:2024. Hence Following method is being recommended to find out the moisture of the Pallets for discussion in upcoming meeting of SC TED 24:

Step 1.
Samples of stringer or block size of 150 mm length and sample of plank size of 150 mm length is weighed.

Step 2.
Same samples are put in to oven drier and every 5 min weight is recorded till weight remains constant.

Step 3
Moisture content of pallet is calculated as follows.

Moisture Content =[(Step 1 - Step 2) ÷ Step 2] × 100.

Moisture Content of plank and stringer or blocks are recorded.

Performance required is 20% MC with 10% plus or Minus tolerance.

1.6 During the discussion on IS 17427:2020, It was also suggested by the WG Members that clause 8 (f) of IS 17427:2020 { *Length of fasteners should be minimum thrice the size of plank*.} should be changed to "**Length of nail will be Height of the Pallet + 20 mm and clinching is recommended.**". It was also suggested by members to include a requirement for the Shape of the Pallet to be Rectangle or Square only. The comments may be considered by SC TED 24 in its upcoming Meeting

There being no other comments, The meeting ended with a vote of Thanks to convener and the WG Members.