SUBJECT 12

SUBJECT 12: Water-Cooling Towers, or Parts thereof – Items 154667, 187030 and 187520

Re: **Water-Cooling Towers, or Parts thereof – Items 154667, 187030 and 187520**

Contact: Amber Parker FCDC@nmfta.org

Proponent: Freight Classification Development Council

Quick View

The Quick View feature is not intended to replace contextual information within this document. To understand the potential impact of the recommended changes shown here, please read the full proposal.

Subject 12: Water-Cooling Towers, or Parts thereof – Items 154667, 187030 and 187520

Quick View: Three items applying on water-cooling towers and water-cooling tower parts are canceled with reference to a new item, which provides classes predicated on greatest dimension and density.

- One new Note established attendant to the new item

Transportation Characteristics Present:

- Handling ☒Yes ☐No Stowability ☒Yes ☐No Liability ☒Yes ☐No Density ☒Yes ☐No

Provisions based on:

- Greatest dimension and density

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Present Classification Provisions

Item	Description	Class
154667	**Parts,** air conditioner water cooling tower:	
Sub 1	**Fan Cylinders; Grids or Grid Supports; or Pipe Bands;** glass fiber reinforced plastic; in packages	200
Sub 2	**Fan Blades,** unassembled; **Connectors; Moldings; or Flange Sections,** nested; glass fiber reinforced plastic; in packages	85
187030	**Towers,** water cooling, air conditioner, with or without blowers or fans:	
Sub 1	Plastic, with or without metal fittings or connections	200
Sub 2	Sheet steel, 20 gauge or thinner, aluminum or aluminum and sheet steel combined:	
Sub 3	SU, in boxes	150
Sub 4	KD, in packages	85
Sub 5	Sheet steel, thicker than 20 gauge or steel and wood combined:	
Sub 6	SU	100
Sub 7	KD, in boxes or crates	70
187520	**Troughs,** water cooling tower, metal, nested, in boxes or crates	85

Proposed Classification Provisions

Item	Description	Class
154667	**Parts,** air conditioner water cooling tower, etc	⇉Cancel; see item A-NEW
187030	**Towers,** water cooling, air conditioner, with or without blowers or fans, etc	⇉Cancel; see item A-NEW
187520	**Troughs,** water cooling tower, metal, nested, etc	⇉Cancel; see item A-NEW

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Proposed Classification Provisions—Concluded

Item	Description	Class
⇉A-NEW	**Towers,** water cooling, **or Parts thereof,** NOI, in packages, see Note, item B-NEW:	
Sub 1	Greatest dimension exceeding 288 inches subject to Item 170 and having a density in pounds per cubic foot of:	
Sub 2	Less than 6	500
Sub 3	6 but less than 10	200
Sub 4	10 but less than 22.5	92.5
Sub 5	22.5 or greater	85
Sub 6	Greatest dimension exceeding 192 inches but not exceeding 288 inches, subject to Item 170 and having a density in pounds per cubic foot of:	
Sub 7	Less than 6	400
Sub 8	6 but less than 10	175
Sub 9	10 but less than 22.5	85
Sub 10	22.5 or greater	77.5
Sub 11	Greatest dimension exceeding 96 inches but not exceeding 192 inches, subject to Item 170 and having a density in pounds per cubic foot of:	
Sub 12	Less than 6	300
Sub 13	6 but less than 10	150
Sub 14	10 but less than 22.5	77.5
Sub 15	22.5 or greater	70
Sub 16	Greatest dimension not exceeding 96 inches, subject to Item 170 and having a density in pounds per cubic foot of:	
Sub 17	Less than 6	250
Sub 18	6 but less than 10	125
Sub 19	10 but less than 22.5	70
Sub 20	22.5 or greater	65
⇉B-NEW	NOTE—Articles tendered for shipment on lift truck skids, pallets or platforms must be securely fastened to and must not overhang the edges of the lift truck skid, pallet or platform deck. Exposed surfaces and edges must be protected by packing forms or other packaging materials so as to withstand the normal rigors of the less-than-truckload environment.	

Analysis

Introduction

Three items, as shown in the Present Classification Provisions herein, name particular types of water-cooling towers or parts thereof, and these provisions can be difficult to interpret, apply, or verify.

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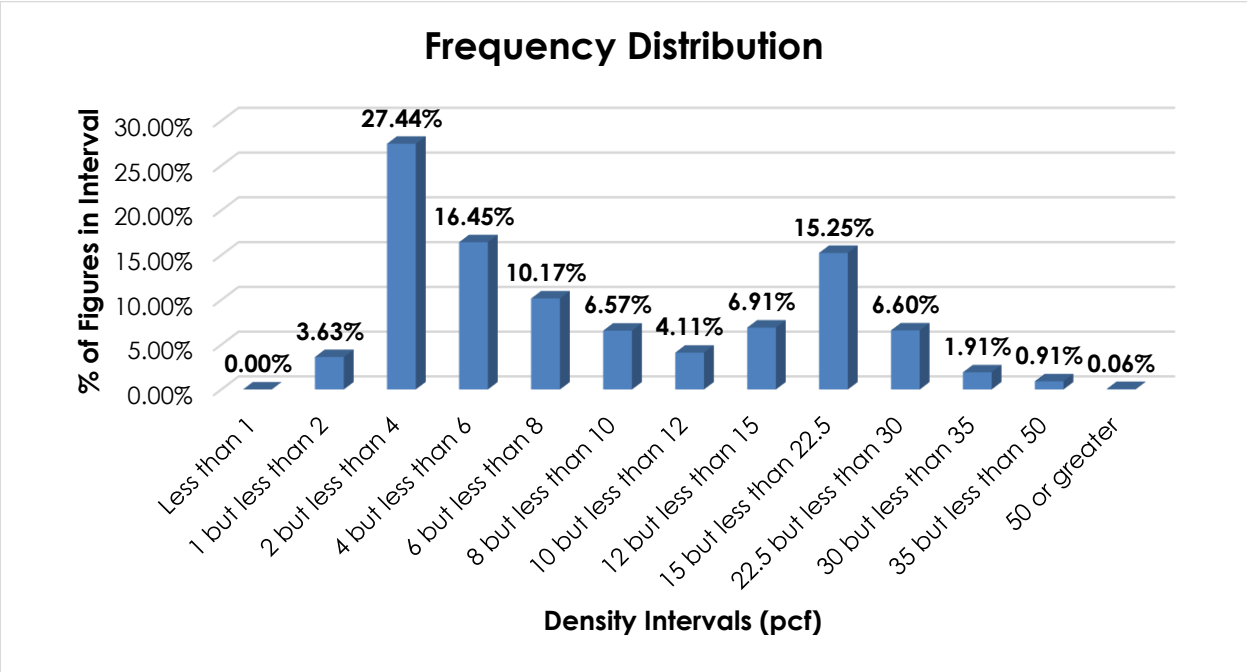
Transportation Characteristics

The information of record includes 3,502 density observations obtained from the FCDC's Density Study[1]. The densities range from 1.34 to 50.38 pcf, with an overall average density of 9.83 pcf. As shown in the graph below, the densities are roughly bimodal, with peaks in the 2 but less than 4 pcf and 15 but less than 22.5 pcf intervals. Density breaks at 6, 10, and 22.5 pcf reflect the modality and spread of the distribution.



When the data is evaluated based on the proposed density breaks at 6, 10, and 22.5 pcf, the density ranges and averages shown in the table below emerge.

Density Groups (pcf)	Density Range (pcf)	Average Density (pcf)
Less than 6	1.34 – 5.99	3.43
6 but less than 10	6.00 – 9.99	7.69
10 but less than 22.5	10.00 – 22.48	16.06
22.5 or greater	22.52 – 50.38	28.34

[1] The Density Study is part of an ongoing effort by the FCDC to collect information on actual shipments across all product categories handled by the LTL industry. Carriers that choose to participate in the Study periodically submit shipment data captured through their respective freight auditing programs. The FCDC uses verifiable data points, identified by NMFC item, that include the weight and the dimensions and/or cube of the shipping unit.

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Handling—When not exceeding 96 inches in greatest dimension, the involved products may be tendered in boxes secured on lift truck skids or pallets, or in crates, but as greatest dimension increases, the commodities are typically tendered in packages other than boxes or crates. When not exceeding 96 inches in greatest dimension, the involved articles do not appear to have any significant handling issues. However, these commodities vary greatly in size and research indicates that many water-cooling towers exceed 288 inches (24 feet) in greatest dimension[2]. As greatest dimension increases, the handling into and out of the vehicle becomes considerably more difficult, and specialized equipment, or additional personnel, may be necessary to safely handle longer units. Furthermore, as greatest dimension increases, cross-dock operations can be significantly affected.

Stowability—When the involved articles do not exceed 96 inches in greatest dimension, they typically do not present significant or unusual stowability issues. Handling units exceeding 96 inches in greatest dimension are more difficult to stow with other general freight. Due to the commodities' size and configuration, it may be difficult to stow adjacent or top freight. These factors make it more difficult, and time consuming for the carrier to properly structure the load and maximize vehicle utilization. Furthermore, for the largest articles, the carrier will have to ensure that the freight will fit in the vehicle.

Liability—The involved products are neither perishable nor hazardous. Shipments of these commodities not adequately protected by packaging materials or that overhang the lift truck skid or pallet are more liable to damage. Also, they can damage other freight if not correctly stowed within the vehicle.

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[2] Item (Rule) 568, "Heavy or Bulky Freight—Loading or Unloading," employs the threshold limit of exceeding 8 feet (96 inches) in greatest dimension as the measurement at which freight becomes more difficult to load and unload when compared to general boxed freight.

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Conclusion

Based on the foregoing analysis, this proposal would cancel items 154667, 187030, and 187520 with reference to a new item, naming "Towers, water cooling, or Parts thereof, NOI." The new item would provide classes predicated on greatest dimension and density, with density breaks at 6, 10, and 22.5 pcf[3]. The table below shows the average densities and minimum average density guidelines for each density group, the guideline classes, and class adjustments as greatest dimension increases.

Density Group (pcf)	Average Density (pcf)	Class Based on FCDC Guidelines	Class Adjustment When Greatest Dimension Does Not Exceed 96"	Class Adjustment When Greatest Dimension Exceeds 96" But Does Not Exceed 192"	Class Adjustment When Greatest Dimension Exceeds 192" But Does Not Exceed 288"	Class Adjustment When Greatest Dimension Exceeds 288"
Less than 6	3.43	3	250	300	400	500
6 but less than 10	7.69	7	125	150	175	200
10 but less than 22.5	16.06	15	70	77.5	85	92.5
22.5 or greater	28.34	22.5	65	70	77.5	85

The FCDC's Packaging Development Manager has reviewed the minimum packaging requirements and determined that they are appropriate for the LTL environment. The minimum packaging requirements would ensure that freight is adequately protected and can be handled and stowed in a manner that is reasonably safe and practicable so as to withstand the normal rigors of the less-than-truckload environment. Additionally, a new attendant Note would be established to provide additional packaging requirements.

[3] The density provisions would include reference to Item (Rule) 170, the inadvertence clause.

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