Accredited Standards Committee H35

ALUMINUM and ALUMINUM ALLOYS

ANSI Accredited Standards Committee

Secretariat:

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DATE: September 15, 2025

TO: Cheoljoon Park

cheoljoon.park@seah.co.kr

FROM: Sam Muhamed

Sr. Manager, Standards & Technology

smuhamed@aluminum.org

SUBJECT: Re: Inquiry Regarding ANSI H35.2 (2017), Table 11.7 Twist Tolerance Clause

Dear Mr. Cheoljoon Park,

The question that you submitted was reviewed by our Technical Committee on Product Standards (TCPS). Your question, and our response to it, are as follows:

Your Question:

We are writing to request clarification on a specific clause in ANSI H35.2-2017 (*Dimensional Tolerances for Aluminum Mill Products*), Table 11.7 (Twist tolerances for bars and profiles).

Our inquiry concerns the column heading phrase:

"IN TOTAL LENGTH OR IN ANY MEASURED SEGMENT OF ONE FT. OR MORE OF TOTAL LENGTH."

We manufacture an extruded aluminum profile (alloy 7075-T73511) of 144 inches (3.66 meters) in length and need to ensure we apply the twist tolerance correctly during inspection.

Specifically, we seek to understand whether the quoted "OR" clause should be interpreted as requiring:

- Both the full 144-inch length and any contiguous one-foot segment each to satisfy the twist tolerance (i.e. a cumulative requirement – the part would fail if either the total-length twist or the twist of any one-foot segment exceeds the allowable deviation), or
- 2. **Either** one of the two conditions being satisfied (i.e. it is sufficient if *either* the twist measured over the entire length is within tolerance *or* the twist measured on any qualifying one-foot segment is within tolerance).

[REDACTED]

Clarification of this issue is important for us, as the correct interpretation of the "OR" clause will directly affect how we determine acceptance of our long-length extruded products.

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We kindly request your official guidance on whether the twist tolerance must be met on both scales (total length and one-foot segments) or if meeting it on either scale is sufficient.

Response:

The interpretation in 1 is correct. Twist tolerances must be met across the entire 144 in. length <u>and</u> in <u>any</u> segment of 1 ft. or higher. Please also note that "segment" does not necessarily refer to mutually exclusive one-foot subdivisions within the span (i.e., not only Segment A 0-12 in, Segment B 12-24 in., Segment C 24-36 in., and so on), but to <u>any</u> two points on the span which are 1 ft. or more apart (for example, a segment for measuring twist could be from the 53.2 in. point to the 98.1 in. point because a pronounced twist may have been observed in that segment).

With regards to the twist tolerances across the entire span, please note that the applicable value shall be the lower of:

- a) "per foot" value times the total length, or
- b) the given "maximum for total length".

The video on twist tolerances in the following playlist may be helpful in illustrating twist tolerance measurements:

https://youtube.com/playlist?list=PLJhPoDFvCALInwiy3mll0J9jl46l_rcgb&si=wJeYgJuxyFwj-dZH

With best regards,

Sam Muhamed cc: TCPS Members

ACC USE Manchana

ASC H35 Members

Janis Penman - Baker & Hostetler