

**P260.1 Working Group  
Minutes of August 21, 2023 from 10 AM to 12 PM PDT  
Web Teleconference Meeting**

**1. Call to Order**

Call to order at 10:02 AM (PDT).

<b>Last, First Name</b>	<b>Affiliation</b>	<b>Present</b>
Curey, Randy (Chair)	Northrop Grumman	Yes
Balma, Peter	Retired, Self	No
Edwards, Doug (Secretary)	Siemens	Yes
Ressel, Howard	Retired, Self	Yes
Webb, John	ABB	No
Flowers, Keith	Siemens	No
Sullivan, Paul	DuPont	Yes

**2. Determination of Quorum**

Quorum was met.

**3. Approval of Agenda**

No objections. Approved by acclamation.

**4. Approval of Meeting Minutes**

[P260.1 WG Minutes \(2023-08-10.R1\)](#) minutes were approved with spelling correction ("Exaction" to "Exact" – item 7) by acclamation.

**5. Call for Patents / Copyright**

- Patent Slides reminder discussed.
- Copyright discussed.
- No Patent or Copyright issues reported.
- Participant behavior discussed.

**6. Chair's Remarks**

None, other than we are getting close.

**7. Resolve identified issues from recirculation ballot in Comment Resolutions**

Exact conversions evaluations task continued.

Non-terminal decimals, all items based on such are not exact. Examined Gallons to Liters.

Method of using prime numbers only for all the factors of a calculation and cancelling of numerator and denominator prime factors simplifies down to see if there a denominator factors the results in a non-terminating decimal.

Agreed to be provided will be kept simple, e.g. "the conversion is exact."

Reexamined some of the units.

**P260.1 Working Group  
Minutes of August 21, 2023 from 10 AM to 12 PM PDT  
Web Teleconference Meeting**

- a. Grain: Did math using prime numbers, Exact. Also, based on Federal Register July 1, 1959 makes the inch exactly 25.4 mm (US Law); same document indicates this was already accepted by ASA in 1933 (ASA B48.1-1933). Also same Fed. Reg. notes that "Relation to grain. The new conversion factor for the pound is exactly divisible by 7 and results in following exact value for the grain."
- b. Dry pint: Also, we confirmed this evaluation using the evaluation of only Prime number factors.
- c. Pound: Exact. Math is based on division by 2.
- d. Imperial pint: Exact: Math is based on division by 2.
- e. Troy ounce: Exact: See Grain.
- f. Maxwell: Exact: Calculated Maxwell in terms of Weber.
- g. second (plane angle): Not exact. Removed bold.
- h. Next meeting – Pickup consideration of exact calculations where we have equation that result in non-terminating decimals. Potentially, add note(s) for these items.
- i. Screenshot shows final notes from this meeting.

Disposition	Status	Disposition Detail	Other1	Other2	Other3
Proposed Change		<p>A gallon is defined as exactly 231 cubic inches. The conversion from inches to meters is exact. Liters is defined as cubic meters. From these factors exact conversions can be determined for all US liquid measurements (barrel, gallon, ounce, quart, pint, cup, tablespoon and teaspoon).</p> <p>Also because the conversion from inches to meters is exact, exact conversions can be determined for inch, foot, yard, and mile.</p> <p>A dry pint is defined as exactly 33.600 312 5 cubic inches, therefore an exact conversion is possible.</p> <p>Same for dry quart, which is 2 times a dry pint.</p> <p>Continued in Other1 column.</p>	<p>The pound (avoirdupois) is defined as exactly as 0.453 592 37 kg, therefore it is possible to determine an exact conversion factor for ounce (avoirdupois).</p> <p>The imperial pint is defined as exactly 0.568 261 25 L, therefore an exact conversion factor for the imperial quart is possible.</p> <p>A slinch is exactly 12 slugs.</p> <p>Multiple sources define stokes as exactly 1e-4 meters-squared-per-second.</p> <p>One grain is defined as (1/7000) lb, and a pound is defined as 0.453 592 37 kg, there an exact conversion factor is possible.</p> <p>A troy ounce is defined as 480 grains, and 1 grain is exactly 6.479 891 × 10-5 kg, therefore an exact conversion factor is possible.</p> <p>Continued in Other2 column</p>	<p>Pound is defined as 0.453 592 37 kg and 1 ft is exactly 0.3048 m, therefore an exact conversion factor can be found for poundal.</p> <p>NIST Special Publication 811 shows the conversion factor for gauss as exact.</p> <p>The joule is a kg(m<sup>2</sup>/s<sup>2</sup>), the W-s is kg(m<sup>2</sup>/s<sup>3</sup>);s, therefore the exact conversion factor is 1.</p> <p>Unbolded british thermal unit (international table) and (thermochemical) conversion factors and added footnote h.</p> <p>Unbolded circular mil, and orstead conversion factors and added footnote i.</p> <p>Continued in Other 3 column</p>	<p>1 maxwell = 1 gauss × (centimetre)<sup>2</sup>, 1 G = 1 × 10-4 T, and 1 T := 1 Wb/m<sup>2</sup> therefore 1 Mx = 1 × 10-8 Wb.</p> <p>second (plane angle) I regards to this while an exact conversion is not possible, the equation is exact. Add footnote similar to others.</p>

**P260.1 Working Group  
Minutes of August 21, 2023 from 10 AM to 12 PM PDT  
Web Teleconference Meeting**

**8. Next Meeting**

A Doodle poll will be sent out to determine next meeting date.

**9. Adjournment**

Meeting adjourned at 12:02 PM (PST).

Reported by,  
Doug Edwards, Siemens  
Secretary, P260.1 WG