



**2022 CEMA FALL ENGINEERING CONFERENCE
CONVEYOR PULLEY COMMITTEE MEETING**

Cisco Webex Meetings
Monday, November 7, 2022

MINUTES

1. Call to order
Benjamin Brewer, Douglas Manufacturing Co. Inc.; Chair, called the meeting to order at 3:35 pm.
2. Attendance and Introductions – Roll call attached
3. Approval of Minutes of June 14, 2022 – Minutes were approved.
4. Old business

a) **Unit Pulley Standard to better support unit pulley requirements (CEMA Standard No. B106.1)** – Updates. Survey Results.

Subcommittee: Jeff Ellis, PPI (chair); Benjamin Brewer, Douglas Manufacturing Co. Inc.; Bob Hawkins, Continental Global MH; Zac Casper, Talos Engineered Products; Ted Hotvet, Van Gorp; Paul Schmidgall, Superior Industries; Don Suderman, Bunting; Eddie Geerdes, Universal Industries, Tamara Thimmel, Bryant Products; Greg Pollitt, Honeywell Intelligrated.

It was determined that the Unit Pulleys are distinguished enough to demand a new independent standard. Using ANSI/CEMA Standard B105.1 as a template.

They will add a rollers section to the standard. It was settled on simplifying it to a live shaft pulley and dead/non-rotating shaft roller with steel shafts for now. It will be needed to set up load ratings for the rollers rather than describing certain bearing types or sizes to avoid specifying the individual components as that is not CEMA's intent.

Work is still in progress. The subcommittee established a series of meetings to have the final draft ready for the 2023 CEMA Summer Engineering Conference. This includes the survey regarding the load ratings.

b) **Maximum Tension Ratio per Diameter per Inch Belt Width** – Updates.

Subcommittee: Brett DeVries, FLEXCO (chair); Chad Brown & David Keech, Dodge Industrial, Inc.; Bob Hawkins, Continental Global MH.; Jeff Ellis, PPI; Al Reicks, Overland Conveyor Co., Inc.; Benjamin Brewer, Douglas Manufacturing Co. Inc.; David Jesse,



Lassing Dibben Consulting Engineers Ltd.; Peter Bradley, Continental ContiTech – North America.

The initial task of the subcommittee was to determine the minimum pulley diameter size based on the horsepower transmitted.

Brett presented his work and calculator on lagging friction factors. He is currently looking for help analyzing the data he's gathered, and/or using his calculator to compare to real-world results. His question was, do we use his calculator in the future or stick with the existing Euler equation?

Al Reicks (not present) had agreed to help verify results but had questions about what the calculator was doing. Jeff Ellis volunteered to present real-world applications to Brett in an effort to validate the calculator. The group agreed that more validation of the calculator would be needed before it could be voted on in any way at the Engineering Conference.

- c) **ANSI/CEMA Standard. B105.1 “Specifications for Welded Steel Conveyor Pulleys – With Compression Type Hubs”- Pulley and Shaft Selection Tables 4A and 4B.** How often are these used? In what way do we feel they are used? – Updates.

Subcommittee: David Keech, Dodge Industrial, Inc. (chair); Benjamin Brewer, Douglas Manufacturing Co. Inc.; Jeff Ellis, PPI; Andrew Hustrulid, Shaw Almex Industries Ltd.; Paul Ormsbee, Overland Conveyor Co., Inc.; Brett DeVries, FLEXCO; Marc Dos Santos, Dos Santos International.

The Committee should gather more pulley manufacturers' input on removing some of the odd pulley shaft sizes. There should be a further discussion in the subcommittee to determine what to do with Tables 4A and 4B. There were some suggestions they are removed altogether, but they need to remain as a reference for the pulley load ratings.

David Keech provided a summary of the previous discussions. He doesn't see a way to remove the tables because there is no single formula to substitute this. Also, he recommends leaving it as is. The information has been used since the 1960s.

Additionally, it was mentioned that during some events in Chile, it was shown a presentation (VOITH Turbo Mulheim - Germany) about the pulley design according to CEMA and the German guidelines differences trying to show why CEMA was deficient. Jeff will investigate more and document the findings about this a provide more information during the 2023 CEMA Summer Engineering Conference.



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There was concern voiced by several participants that other standards organizations have a broader reach than CEMA, and dive into engineered pulleys more than CEMA does.

It was suggested that the CEMA Board of Directors may need to weigh in on this topic. No current plans were made, and this will continue as a topic in the 2023 CEMA Summer Engineering Conference

5. New Business– No new business was discussed at this meeting.
6. Next Meeting – June 13, 2023, LaPlaya Beach & Golf Resort, Naples, FL.
7. Meeting was adjourned at 4:32 pm

Benjamin Brewer, Chair
Jeff Ellis, Vice-Chair

2022 CEMA VIRTUAL FALL ENGINEERING CONFERENCE - CONVEYOR PULLEY COMMITTEE - Roll Call

Attendance Count	Event Name	First Name	Last Name	Email	Title	Company	Phone	Country/Region
1	2022 CEMA Fall Engineering Conference - Conveyor Pulley Committee	Juan	Aristizabal	aristizabal.juan@dismet.com	Engineer	DISMET SAS	57-6017494000	Colombia
2	2022 CEMA Fall Engineering Conference - Conveyor Pulley Committee	Casey	Bergman	casey@vortexglobal.com	Product Development Manager	Salina Vortex Corp.	1-7858257177	United States of America
3	2022 CEMA Fall Engineering Conference - Conveyor Pulley Committee	Benjamin	Brewer	bbrewer@douglasmanufacturing.com	Chief Engineer	Douglas Mfg	1-2057530347	United States of America
4	2022 CEMA Fall Engineering Conference - Conveyor Pulley Committee	Chad	Brown	cbrown@dodgeindustrial.com	Application Engineering Manager	Dodge Industrial	1-8642526195	United States of America
5	2022 CEMA Fall Engineering Conference - Conveyor Pulley Committee	Alberto	Chamorro	achamorro@douglasmanufacturing.com	Engineer	Douglas Manufacturing	1-2057530727	United States of America
6	2022 CEMA Fall Engineering Conference - Conveyor Pulley Committee	Patrick	Cucco	pcucco@ashlandconveyor.com	Product Design Manager	Ashland Conveyor Products	1-4192811235	United States of America
7	2022 CEMA Fall Engineering Conference - Conveyor Pulley Committee	Brett	DeVries	bdevries@flexco.com	Engineer	FLEXCO	1-6162421636	United States of America
8	2022 CEMA Fall Engineering Conference - Conveyor Pulley Committee	Marc	Dos Santos	marc@dossantosintl.com	VP/COO	Dos Santos International	1-7704239895	United States of America
9	2022 CEMA Fall Engineering Conference - Conveyor Pulley Committee	Jeff	Ellis	jellis@ppi-global.com	Product Engineering Manager	Product Engineering Manager	1-6416212523	United States of America
10	2022 CEMA Fall Engineering Conference - Conveyor Pulley Committee	Nate	Evans	nevans@seweurodrive.com	Application Engineer	SEW Eurodrive	1-12143304824	United States of America
11	2022 CEMA Fall Engineering Conference - Conveyor Pulley Committee	Naylu	Garces	naylu@cemanet.org	CEMA's Engineering Manager	CEMA	1-2392608009	United States of America
12	2022 CEMA Fall Engineering Conference - Conveyor Pulley Committee	Nick	Heward	nicholas.heward@mhsglobal.com	Project Engineer	Material Handling Systems	1-801-834-3535	United States of America
13	2022 CEMA Fall Engineering Conference - Conveyor Pulley Committee	Joshua	Holcombe	joshua.holcombe@continental.com	Research and Development Engineer	Continental	1-9376448913	United States of America
14	2022 CEMA Fall Engineering Conference - Conveyor Pulley Committee	David	Keech	dkeech@dodgeindustrial.com	Senior Development Engineer	Dodge Industrial	1-8645532101	United States of America
15	2022 CEMA Fall Engineering Conference - Conveyor Pulley Committee	Jim	Masek	jmasek@ppi-global.com	Engineering Manager	PPI	1-6417803135	United States of America
16	2022 CEMA Fall Engineering Conference - Conveyor Pulley Committee	Amanda	Miller	amanda.miller@cisco-eagle.com	Project Manager	Cisco-Eagle, Inc	1-9182805005	United States of America
17	2022 CEMA Fall Engineering Conference - Conveyor Pulley Committee	Dan	Miners	danminers@cambelt.com	Director of Engineering	Cambelt International LLC	1-3852299403	United States of America
18	2022 CEMA Fall Engineering Conference - Conveyor Pulley Committee	Paul	Ormsbee	ormsbee@overlandconveyor.com	General Manager	Overland Conveyor Company	1-3038038850	United States of America
19	2022 CEMA Fall Engineering Conference - Conveyor Pulley Committee	Ryan	Remetich	rremetich@douglasmanufacturing.com	Mechanical Engineer	Douglas Manufacturing	1-2058841200	United States of America
20	2022 CEMA Fall Engineering Conference - Conveyor Pulley Committee	Paul	Schmidgall	p.schmidgall@superior-ind.com	Chief Engineer	Superior Industries	1-3205892406	United States of America
21	2022 CEMA Fall Engineering Conference - Conveyor Pulley Committee	Geoff	Stoll	gstoll@richwood.com	Engineering Manager	Richwood	1-3045255436	United States of America
22	2022 CEMA Fall Engineering Conference - Conveyor Pulley Committee	Tamara	Thimmel	tamara@bryantpro.com	President	Bryant Products	1-9202066920	United States of America
23	2022 CEMA Fall Engineering Conference - Conveyor Pulley Committee	R.	Todd Swinderman	rtodds.eng@gmail.com	Owner	RTodds Engineering, LLC	1-386-589-4384	United States of America