



**2022 CEMA FALL ENGINEERING CONFERENCE  
BULK BELT SYSTEMS AND EMERGING TECHNOLOGIES COMMITTEE MEETING**

Cisco Webex Meetings  
Monday, November 7, 2022

**MINUTES**

1. Call to order  
Todd Hollingsworth, Raw Resources, LLC; Chair, called the meeting to order at 11:25 am.

2. Attendance and Introductions – Roll call attached.

3. Approval of Minutes of June 14, 2022 – Minutes were approved.

4. Old business

a) **Appendix D – Installation Standard** – Updates

Subcommittee: Todd Swinderman, RToddS Engineering, LLC (chair); Colin Barbeau, Hatch; Jim Masek, PPI; Paul Ormsbee, Overland Conveyor Co. Inc.; Akiko Wakatsuki, Fenner Dunlop Conveyor Belting; Robin Steven, ContiTech North America, Inc; Luis Estay, Bechtel Corporation; Laura Hoggan, REMA Tip Top; Todd Hollingsworth, Raw Engineering and Design, LLC.; David Jesse, Lassing Dibben Consulting Engineers Ltd.; Marcus Dos Santos, Dos Santos International.

The idea is to create two (2) documents:

- One would be an expanded CEMA Belt Book, 8<sup>th</sup> Edition, Appendix D entitled "Belt Conveyors for Bulk Materials Installation and Start-Up Best Practices"
- Second would be a separate document with graphics that CEMA could offer/provide can be offered as a technical paper.

The two (2) documents being created are installation standards. Therefore, it was decided that belt training should be a separate technical paper.

The documents are ready to be sent to the Official Representatives (OR) for approval after this meeting.

b) **Idler Maintenance Safety** – Updates.

Subcommittee: Colin Barbeau, Hatch (chair); Gerhard Schmidt, TAKRAF USA, Inc; Geoff Stoll, Richwood; Jim Masek, PPI; David Jesse, Lassing Dibben Consulting Engineers Ltd; Benjamin Brewer, Douglas Manufacturing Co. Inc.; Erick Jackson, TAKRAF USA, Inc.



A draft was created and includes a weight requirement table for the lifting belt to be added to Chapter 2 of the Belt Book (8<sup>th</sup> edition). Calculations behind the table need to be reviewed for technical accuracy.

Previously, Colin Barbeau submitted a draft regarding the inspection and change, and Benjamin Brewer and Jim Masek are working on the peer review for the belt lifting force table. The draft also includes language about idler replacement technology for inclusion in the Belt Book 8<sup>th</sup> Edition Chapter 16 Emerging Technologies.

The draft is ready for approval. It will be sent to the attendees of this meeting before being sent to the Official Representatives (ORs) for final approval.

- c) **White Paper “CEMA Power Methods”** – Updates  
*Author:* Andrew Jennings, Conveyor Dynamics, Inc.

This white paper is a summary of the history of the CEMA’s Power Calculation Methods. Al Reicks, Overland Conveyor Co. Inc.; will peer-review the white paper.

Andrew was not present during the meeting. Todd Hollingsworth will follow up with Andrew and Al and bring it to a conclusion.

- d) **Condition Monitoring for Overall System Document** – Updates  
Subcommittee: Hans Rodgers, SEW-Eurodrive, Inc. (Chair); Andrew Hustrulid, Shaw Almex Industries Ltd.; Andrew Jennings, Conveyor Dynamics, Inc.; David Jesse, Lassing Dibben Consulting Engineers Ltd.; Al Reicks, Overland Conveyor Co. Inc.; Chad Brown, Dodge Industrial, Inc.; Dan Miners, Cambelt International LLC; Adam Soder, Sumitomo Drive Technologies.

The subcommittee was tasked with providing a path forward for a document that would give end-users advice on the practical use and interpretation of the data.

Hans Rodgers mentioned he will bring this discussion to the CEMA’s Conveyor Controls Committee.

- e) **DEM Transfer Chute Design/Analysis**– Updates  
Subcommittee: Paul Ormsbee, Overland Conveyor Co. Inc. (chair); Matthew Koca, FLEXCO; Andrew Jennings, Conveyor Dynamics, Inc., Colin Barbeau, Hatch; Geoff Stoll, Richwood; David Kruse, Advanced Conveyor Technologies Inc.

It was agreed to move this out of Chapter 16 and into the Transfer Chute Chapter 12 for



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MANUFACTURERS ASSOCIATION

27400 Riverview Center Blvd., Suite 2  
Naples, Florida 34134  
Tel: (239) 514-3441  
Fax: (239) 514-3470

[www.cemanet.org](http://www.cemanet.org)



the CEMA Belt Book, 8<sup>th</sup> Ed.

The subcommittee is still working on text updates, including notes about sticky and/or fine material. They will present the draft at the 2023 CEMA Summer Engineering Conference.

f) **CWD Factor Case – Updates**

Subcommittee: Paul Ormsbee (chair) & Al Reicks, Overland Conveyor Co. Inc.; Andrew Hustrulid, Shaw Almex Industries, Ltd.; Andrew Jennings, Conveyor Dynamics Inc.

Factor to correlate flat belt test to actual trough belt with non-uniform material load distribution across the belt. Non-standard idler sets need to be included. The subcommittee needs to determine how the process can be simplified.

The subcommittee is working on a separate technical paper on CWD. Also, they are working on a set of equations that will expand toward non-standard geometry. Updates will be presented at the 2023 CEMA Engineering Conference.

g) **Pipe Conveyor Stiffness/Aging Fatigue Loss with Lifecycles – Updates**

Subcommittee: Sergio Zamorano, ZING eirl (chair); Joshua Holcombe, Contitech North America, Inc; Luis Estay, Bechtel Corporation; Andrew Jennings, Conveyor Dynamics, Inc.; Paul Ormsbee & Al Reicks, Overland Conveyor Co. Inc.; Akiko Wakatsuki, Fenner Dunlop Americas.

Discussion on the loss of stiffness due to lifecycle fatigue is a large part of wear on pipe conveyors. It brought up the question: how do we quantify this for clients so they can plan replacement/lifetime? It was suggested to look at re-writing the section in the CEMA 7th Ed. Belt Book (for the 8th Ed.).

Sergio was not present during the meeting. However, the current draft has minor feedback. Joshua will contact Sergio and schedule some working meetings to finish this project before the 2023 CEMA Engineering Conference.

h) **ARPM Rubber Energy Discussion**

*Volunteer*: Andrew Hustrulid, Shaw Almex Industries Ltd.

Robin Steven, Continental North America, Inc. sent to the chairs of this committee a document on a proposed belt energy efficiency standard.

It was discussed removing this item from this committee and leaving it at the individual



component committees because the overall conveyor efficiency is difficult to define. However, it was decided to leave it in this committee since there isn't a belting committee.

It was mentioned that VDI 4459 has produced energy efficiency ranges for conveyors in the 2022 version. A subcommittee was created to provide a recommendation at the 2023 CEMA Summer Engineering Conference regarding CEMA adopting/publishing a version of Robing Steven's energy efficiency document.

The subcommittee members are Joshua Holcombe, Contitech North America, Inc.; Paul Ormsbee & Al Reicks, Overland Conveyor Co. Inc.; and Andrew Hustrulid, Shaw Almex Industries Ltd.

i) **Discussion on CEMA Belt Book 8<sup>th</sup> Edition Publication**

Subcommittee: Greg Westphall, Shaw Almex Industries Ltd; Marcus Dos Santos, Dos Santos International; Todd Swinderman, RToddS Engineering, LLC; Todd Hollingsworth, Raw Resources, LLC.

CEMA does not currently have a publication timeline. This Committee recommends asking the CEMA Board of Directors if they want to start working on this.

Additionally, a question was raised: How do we trim down the size of the CEMA Belt Book? The following ideas came up:

- Move Chapter 6 to a separate Design Guidebook.
- Add Calculators to the CEMA site to enable removing tables from CEMA Belt Book and make access to correct data easier for users.

Todd Swinderman created a proposal to set June 2025 as a deadline for the completion of the book. Help is needed with technical writing and images/graphics. He proposed a potential two (2) volumes of the book this time, that needs to be sold as a set:

- 1) General Application Information
- 2) Calculations and Examples

Additionally, he suggested doing the book in SI metric units only. This simplifies force and mass calculations as well as most examples. Simplifies charts and graphs. Soft conversions to inches only where necessary (idlers, belts, etc.).

Also, Naylu Garces, CEMA; has been collecting changes and errata from the second printing that needs to be included in the 8<sup>th</sup> edition.



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Fax: (239) 514-3470



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The proposal will be presented to the CEMA's Board of Directors for discussion at the 2023 CEMA Annual Meeting and the feedback will be provided to this committee at the 2023 CEMA Summer Engineering Conference.

## 5. New Business

### a) **Cleated & Sidewall Belt for Incline Applications**

Subcommittee: Geoff Normanton, Fenner Dunlop (chair); Akiko Wakatsuki, Fenner Dunlop; Laura Hoggan, Rema TIP TOP; Sean Henry & Peter Bradley, Continental Contitech North America, Inc.

This was a topic on this committee in 2019. It was an idea for the CEMA Belt Book, 8<sup>th</sup> Edition. The idea is the inclusion of cleated belts to the existing table in the CEMA Belt Book, 7<sup>th</sup> Edition, Chapter 10. Material properties dependent on caking or sticking/lumping materials, molded vs. cleated (fabricated design), specialty belts; create awareness: consider end-user preference, specific design based on material properties (pocket-cleated-molded, maintenance-cleaning, etc.).

The subcommittee has been working on adding illustrations of the different cleat profiles; identifying and providing a common name for the standard cleat patterns.

There were no subcommittee members present. Tabled until the 2023 CEMA Summer Engineering Conference.

6. Next Meeting – June 13, 2023, LaPlaya Beach & Golf Resort, Naples, FL.

7. Meeting was adjourned at 12:08 pm.

Todd Hollingsworth, Chair

## 2022 CEMA VIRTUAL FALL ENGINEERING CONFERENCE - BULK BELT SYSTEMS AND EMERGING TECHNOLOGIES COMMITTEE - Roll Call

Attendance Count	Event Name	First Name	Last Name	Email	Title	Company	Phone	Country/Region
1	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Zack	Amos	<a href="mailto:zamos@dodgeindustrial.com">zamos@dodgeindustrial.com</a>	Gearing Application Engineer	Dodge Industrial	1-864-281-2162	United States of America
2	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Juan	Aristizabal	<a href="mailto:aristizabal.juan@dismet.com">aristizabal.juan@dismet.com</a>	Engineer	DISMET SAS	57-6017494000	Colombia
3	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Casey	Bergman	<a href="mailto:casey@vortextglobal.com">casey@vortextglobal.com</a>	Product Development Manager	Salina Vortex Corp.	1-7858257177	United States of America
4	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Benjamin	Brewer	<a href="mailto:bbrewer@douglasmanufacturing.com">bbrewer@douglasmanufacturing.com</a>	Chief Engineer	Douglas Mfg	1-2057530347	United States of America
5	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Chad	Brown	<a href="mailto:cbrown@dodgeindustrial.com">cbrown@dodgeindustrial.com</a>	Application Engineering Manager	Dodge Industrial	1-8642526195	United States of America
6	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Alberto	Chamorro	<a href="mailto:achamorro@douglasmanufacturing.com">achamorro@douglasmanufacturing.com</a>	Engineer	Douglas Manufacturing	1-2057530727	United States of America
7	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Brett	DeVries	<a href="mailto:bdevries@flexco.com">bdevries@flexco.com</a>	Engineer	FLEXCO	1-6162421636	United States of America
8	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Marc	Dos Santos	<a href="mailto:marc@dossantosintl.com">marc@dossantosintl.com</a>	VP/COO	Dos Santos International	1-7704239895	United States of America
9	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Jeff	Ellis	<a href="mailto:jellis@ppi-global.com">jellis@ppi-global.com</a>	Product Engineering Manager	Precision Pulley and Idler	1-6416212523	United States of America
10	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Nate	Evans	<a href="mailto:nevans@sewurodrive.com">nevans@sewurodrive.com</a>	Application Engineer	SEW Eurodrive	1-12143304824	United States of America
11	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Naylu	Garces	<a href="mailto:naylu@cemanet.org">naylu@cemanet.org</a>	CEMA's Engineering Manager	CEMA	1-2392608009	United States of America
12	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Kevin	Guay	<a href="mailto:kevin.guay@nhi-mfg.com">kevin.guay@nhi-mfg.com</a>	Dir.-Product Development & Engineering	NHI	1-603-285-9336	United States of America
13	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Nick	Heward	<a href="mailto:nicholas.heward@mhsglobal.com">nicholas.heward@mhsglobal.com</a>	Project Engineer	Material Handling Systems	1-801-834-3535	United States of America
14	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Joshua	Holcombe	<a href="mailto:joshua.holcombe@continental.com">joshua.holcombe@continental.com</a>	Research and Development Engineer	Continental	1-9376448913	United States of America
15	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Todd	Hollingsworth	<a href="mailto:thollingsworth@rawgrp.com">thollingsworth@rawgrp.com</a>	Engineering Technical Specialist	Raw Resources, LLC	1-2088702820	United States of America
16	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	David	Keech	<a href="mailto:dkeech@dodgeindustrial.com">dkeech@dodgeindustrial.com</a>	Senior Development Engineer	Dodge Industrial	1-8645532101	United States of America
17	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Jim	Masek	<a href="mailto:jmasek@ppi-global.com">jmasek@ppi-global.com</a>	Engineering Manager	PPI	1-6417803135	United States of America
18	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Julien	Mathieu-Morel	<a href="mailto:julien.mathieu@hatch.com">julien.mathieu@hatch.com</a>	BMH Lead	Hatch	1-4383202113	Canada
19	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Dan	Miners	<a href="mailto:danminers@cambelt.com">danminers@cambelt.com</a>	Director of Engineering	Cambelt International LLC	1-3852299403	United States of America
20	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Scott	Moss	<a href="mailto:scott.moss@gates.com">scott.moss@gates.com</a>	Business Development Mgr	Gates Corporation	1-7049079625	United States of America
21	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Paul	Ormsbee	<a href="mailto:ormsbee@overlandconveyor.com">ormsbee@overlandconveyor.com</a>	General Manager	Overland Conveyor Company	1-3038038850	United States of America
22	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Andres	Pinto Goya	<a href="mailto:f.vergara@tecrapol.com">f.vergara@tecrapol.com</a>	Engineer	TEC RAPOL	56-990893706	Chile
23	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Ryan	Remetich	<a href="mailto:rremetich@douglasmanufacturing.com">rremetich@douglasmanufacturing.com</a>	Mechanical Engineer	Douglas Manufacturing	1-2058841200	United States of America
24	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Dan	Rosseljong	<a href="mailto:dan.rossejong@shi-g.com">dan.rossejong@shi-g.com</a>	Gearbox Product Manager	Sumitomo Drive Technologies	1-4853355	United States of America
25	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Paul	Schmidgall	<a href="mailto:p.schmidgall@superior-ind.com">p.schmidgall@superior-ind.com</a>	Chief Engineer	Superior Industries	1-3205892406	United States of America
26	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Benjamin	Schweikart	<a href="mailto:bschweikart@argonics.com">bschweikart@argonics.com</a>	Product Engineer	Argonics, Inc.	1-9063154154	United States of America
27	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Samip	Shah	<a href="mailto:samip.shah@lenze.com">samip.shah@lenze.com</a>	Application Engineer	Lenze Americas	1-3317040598	United States of America
28	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Geoff	Stoll	<a href="mailto:gstoll@richwood.com">gstoll@richwood.com</a>	Engineering Manager	Richwood	1-3045255436	United States of America
29	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Andrew	Timmerman	<a href="mailto:andrewt@martin-eng.com">andrewt@martin-eng.com</a>	Global Engineering Manager - R&D	Martin Engineering	1-3095071988	United States of America
30	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	R.	Todd Swinderman	<a href="mailto:rtodds_eng@gmail.com">rtodds_eng@gmail.com</a>	Owner	RTodds Engineering, LLC	1-386-589-4384	United States of America
31	2022 CEMA Fall Engineering Conference - Bulk Belt Systems and Emerging Technologies Committee	Tony	Van Zee	<a href="mailto:tvanzee@ppi-global.com">tvanzee@ppi-global.com</a>	Engineer	PPI	1-6416212520	United States of America