

**ROCKY MOUNTAIN MASTER MECHANICS ASSOCIATION
PLANT EQUIPMENT
MEETING NOTICE AND NOTES**

Location: Holiday Inn

Rapid City SD

Reservations: 605-348-4000

A block of rooms has been reserved for May 7th & 8th with the RMMMA group to receive these rates.

Date: May 8th 9TH 2014

Thursday Dec. 8th

6:30am - 7:45am Registration. Dues are \$40.00 per member

**7:45am – 8:15am Introduction of members and business session of meeting.
Safety share – Area awareness
Scholarship winners –
Next meetings:
December 4th and 5th 2014
May 7th and 8th 2015**

8:15am- 8:30am Break

8:30am – 10:00am Joint meeting with the Mobil – Fall Protection

RMMA Members:

Shur Safety for fall protection demonstrations.

Don't forget a recovery system, recovery plan, and training

Engineering for tie off points.

Consolidated Engineering Inc.

Edward S. Scott – escott@ceincorp.com – PH: 307.682.0768

10:00am – 10:15 am Break, Plant Breaks Out

10:15am – 10:45am Safety Talk and Open discussion

Safety share – a piece of hand rail fell off of the silo 200 feet at Cordero.

Pegs that were mounted on the silo had worn out welds.

- MSHA – hitting electrical hard. I.E. Color of the month, switch labeling, jog switches.
- Steel cable belts? Run belt scans, how often? Veyance technologies soon to be (Contitech) does the scan and repair. Just repair the broken cables.
- Confined spaces? Confined spaces are not intended for extended occupation and must have easy egress. They must be Labeled, use of confined space permit when entering, must have attendant training, and have entrant training.
- Rotary dryers or kilns?
- Welding grounding – MSHA has sent out a report requiring welders to ground next to where they are welding. Subject to inspectors interpretation. CPE adheres to this policy because it could arc through bearings and cause a shocking hazard.

10:45am - 11:00 Break

11:00am –12:00pm **REXNORD – Jim Miller – jm.miller@rexnord.com**
C: 970.481.5493
REXNORD – Jeffery Rafter – Jeffery.rafter@rexnord.com
P: 414.937.4017 C: 414.708.1979
MOTION INDUSTRIES – Kenny Lazarus –
kenny.lazarus@motion-ind.com
P: 307.682.8821 C: 307.696.3789
SULZER / EMS – Mark Herrmann web: www.sulzer.com
mark.herrmann@sulzer.com
P: 307.682.8733 or 800.950.3382

- Partnership between all three companies (Rexnord, Motion and Sulzer)
- Rebuild and checkout gearboxes.
- Q – If you don't have the part in stock do we get free shipping?
- A – Not really, we either have it in stock or can get it extremely fast.
- Q – Do you have a reconditioned gearing for certain gearboxes?
- A – We have a SAP inventory system if you need a certain gear we can tell instantly if we do have the reconditioned gear in inventory that you can use until we build a new for you. We'll look at all of the options to get you up faster.
- Q – Can you track what is in the gearbox if it has changed?
- A – We keep track of all Falk gearboxes by a MO Number that lets us know any changes to that gearbox.
- Q – What about customer interaction
- A – Repair – Sulzer. Parts – Motion.
- Q – Is most of your reconditioned gearing Falk Gearing?
- A – Yes it is but we are looking at
- Q – Do you offer field service?
- A – Depends on the application and need.
- Gearbox Maintenance and operation.
- The partnership will sponsor a gearbox school summer of 2014 (4 hour)
- Q – How does that differ from the regular school?
- A – This would not be as hands on as the school in Milwaukee.
- Number one reason for failure is lubrication
- Alignment, shaft to shaft or soft foot.
- Water, use correct breathers
- Temperature, pay attention to cooling systems. (fans or tubes)
- Q - Can we get you to come out and add additive to stored gearboxes
- A – You bet just let us know.

12:00pm - 1:00pm Lunch

1:00pm – 3:00 pm **Oil Analysis Lab, Plant oil lab case studies**
Lane Crandall – lanec@oillab.com web: www.oillab.com
P: 509.535.9791 C: 509.981.0188

Condition Monitoring, Using Oil Analysis on Fixed Plant Equipment

- Lube room
- Q – What was the cost of the lube room?
- A – A little over 100k
- Q – What do you do with new oil that doesn't pass the test
- A – We polish if possible if not call the lube company and reject the oil.
- Gearbox filtration
- Q – What is the flow rate through the filter?
- A – 5gpm
- Condition Monitoring Theory –
- Condition Based Philosophy – Contamination (Dirt, Water, Oxidation)

- Change component on condition – abnormal wear condition
- Maximum usage of equipment
- Equipment Condition Monitoring
 - Spectroanalysis
 - Viscosity
 - Particle count
 - Particle analysis
 - Filter analysis
- How to extend component and oil life
 - Keep it clean
 - Keep it dry
 - Keep it cool
 - Monitor
 - Act when there is a problem

Q – Does knowing the components of a gearbox helpful?

A – You bet if we know the components when we do a filter analysis we can tell what in your gearbox is failing. Type, size and shape of wear metals determine source.

- Filtration - General
 - Filter rating
 - Nominal
 - Beta
 - Filter media types
 - Paper
 - Fiberglass
 - Filter location
 - Suction
 - Pressure
 - Return
 - By-pass or Kidney
 - Filtration systems
 - Hard plumbed kidney system
 - Filter carts
 - Full flow pressure system
 - Return
 - Breathers
- Other sources of data
 - Filter residue analysis
 - Magnetic
 - Thermography
 - Vibration
 - Grease analysis
 - Ultra Sonic
- Sampling procedures
 - Consistent sampling procedures
 - Test selection to predict failure
 - Consistent and repeatable lab analysis
 - Proper data interpretation and analysis
 - Acting on the data in a timely manner
 - Documenting the prediction or not and calculation the cost or cost saving
 -

3:00pm— 3:15pm Break

3:15pm- 4:00pm

Philadelphia gear Drive system

Brett Baldwin b.baldwin@philagear.com

C: 719.233.5605

Wazee Electric

Bernie Sharp bsharp@wazeeeco.com

P: 303.623.8658 C: 030.594.9207

Gear Reducers – General Understanding and Maintenance Issues

- Gearing nomenclature
- Major gear types
 - o Spur
 - o Helical
- Gear bevels
 - o Gleason
 - o Klingelberg
- Backlash
- Float
- Through hardened
- Surface hardened
- Application - Markets
 - o Energy
 - o Hard rock mining
 - o Cement and aggregates
 - o Others
- Lubrication Types
 - o Standard R&O
 - o Synthetics PAO
 - o Synthetics PAG
- Lubrication Filtration
 - o Barrier
 - o Desiccants
 - o Magnetic
- Conditioning
- Alignment
- Tooth failures
- Bearing failures

4:00pm

Adjourn

6:00pm

Social Hour

7:00pm

Dinner

Please take the time to thank the Suppliers group, as they have provided our social hour, dinner.

Friday, May, 9th 2014

8:00am - 9:00am

**MSHA joint meeting with Mobil - web: www.msha.gov
MSHA – William “Bill” Enderby enderby.william@dol.gov
P: 605.348.2076 C: 720.202.2272**

- **MSHA Update (Rapid City Field Office)**

- o Advance notice
- o Safety belts and lines
- o Impact inspections
- o Hearing Conservation
- o Dust, Gas, Mist, and Fumes Surveys by mine operator
- o Rules to Live By III
 - Training
 - Wall, Bank and slope Stability
 - Correction of hazardous conditions
 - Safety defect examination, correction and records
 - Life jackets and belts
- o Commencement of operations
 - Notification of commencement closing of operations
- o Blasting issues
- o Inspection procedures right of entry
- o Contractor issues

Q – Vehicle inspection for venders

A – Chalk if you’re parked on an incline

Q – How much training a vender needs

A – If you’re on site doing anything your need site hazard training

Q – If there is a generator on a trailer grounded to the frame with jacks on the corners do you have to have a ground line to the ground?

A – No as long as the generator is grounded to the frame. I would have to double check with the electrical inspector.

Q – What if a seat belt is out of date on the tag?

A – As long as it is in good shape will probably not going to receive a citation but check manufactures recommendation.

Q – Can a contractor use one of your pieces of equipment?

A – Make sure he is trained to the level of a regular employee.

Q – Can MSHA issue a citation on a courtesy inspection?

A – No but we have a hard time giving courtesy inspection. We just don’t have the time.

9:00am - 9:15am

Break

9:15am -10:00am

Interstate/ Flexco belt wiper Information on Installations.

Flexco - Jeff Kennedy jkennedy@flexco.com web:

www.flexco.com

P: 303.730.6052

C: 303.570.6058

- Introduction to belt cleaner products
- Conveyor issues
 - o Safety
 - o Pre-cleaners
 - Issues
 - Positioning
 - o Secondary cleaners

