JUNE 8–11

2020 SUMMIT

A Virtual Leadership Symposium

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U.S. DEPARTMENT OF ENERGY

Best of the Betters: 2020 Better Project and Better Practice Presentations

Wednesday, June 10

11:00 am-12:30 pm ET

Robin Davis

Imerys Carbonates North America

Submit Questions
www.slido.com event code **#bbsummit**
then go to room **“Best of the Betters”**

U.S. DEPARTMENT OF ENERGY

Dust Collector Best Practice

Imerys Industrial Support Team
Robin Davis, Energy Engineer

Imerys Industrial Improvement

IMERYS

Introduction to Imerys

A world leader in mineral-based specialties, offering high value-added solutions to many different industries, ranging from process manufacturing to consumer goods.

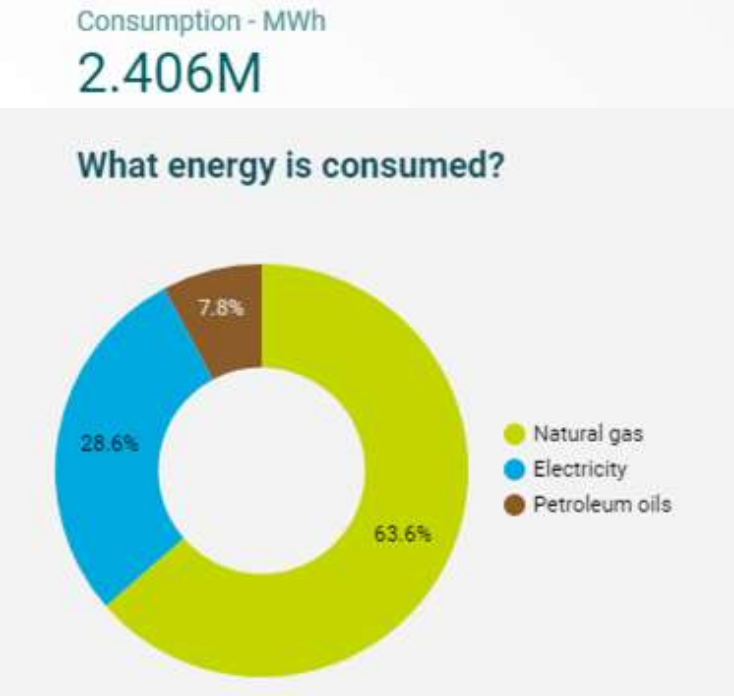
Over 30 Minerals Worldwide - https://www.imerys.com/

We succeed through:

- Best-in-class operations, delivering commercial excellence and market-driven innovation
- A strong business model and value proposition
- Unrivalled technological and industrial processes, solutions and leading positions in most of our markets
- Understanding our customers' applications
- Meeting ambitious targets for being a responsible business

Imerys North America Energy Consumption

- **Compressed air is known to be the least efficient utility in industrial plants.**
- **Dust collectors are the main consumer of compressed air within the Imerys industrial facilities.**
  - Most collectors in operation for environmental compliance.
- **Imerys recognized dust collectors opportunities to improvement performance, efficiency and to reduce environmental impact.**
  - Aligns with corporate sustainability and energy goals
  - Joint project developed with the Asset Management and Global Energy Management Teams to develop the internal best practice for dust collector operation and maintenance.



Dust Collector Best Practice Document

- **Identified Best Practices across NA plants**
  - 40 Plants across North America
  - Over 500 Dust Collectors in North America
  - Numerous sites had ongoing improvement initiatives
  - Included equipment, operations and maintenance protocols
- **Reviewed Industry Standards** & Supplier Guidance
- **Developed Best Practices Document**
- **Includes recommendations that impact** EHS, Energy, Production, Maintenance, and Quality
- **Released to IMERYS Performance Minerals - North America** on March 18th

IMERYS
TRANSFORM TO PERFORM

Dust Collectors Maintenance Best practice		
Sender: **Asset Management Team**	Page 1 of 17	

Dust Collectors Maintenance Best Practice

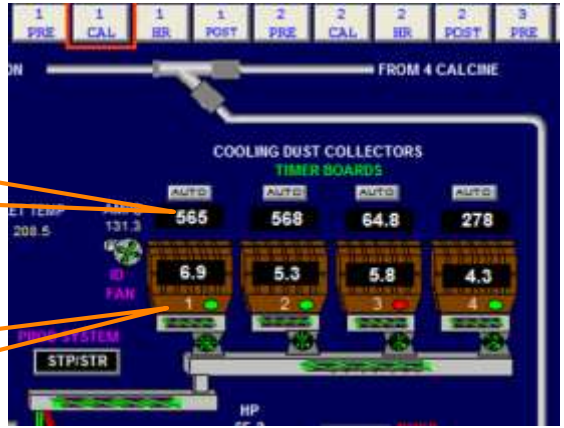
Version	Date	Sender / Update's responsible	Approval	Modifications operated since previous version	Number of pages
V1.0	01/27/2020	R. Davis		Initial version	17

Related Documents
Ref:

IMERYS

New Technologies and Standardization

MAC Valves Installed @ Sandersville Calcine Plant



Time collector pulsed in past 24 hrs captured for Improvement Tracking

Differential Pressure Displayed and Captured in Historian

- **Lower Plant Air Pressure**
  - Reduction in **energy** spend
- **New Pulse Valves (MAC Valves)**
  - Reduced Air Consumption
- **New Water Seperators/Filter (Tsunami)**
  - Increased reliability
- **Differential Pressure Monitors**
  - EHS Compliance
  - Troubleshooting
- **Pulse On Demand**
  - Reduced Air Consumption
  - Increase Bag Life

IMERYS

Impact

- **Pilot Site: Sandersville GA, Calcine Plant**
  - Reducing the plant air pressure from 100 PSIG to 85 PSIG allowed us to shut down our first compressor. (75 connected HP)
  - Implementation of pulse-on-demand for 4 collectors showed a pulse reduction of over 40% in 1 collector and over 70% in other.
  - MAC Valves are presenting about 20% air consumption reduction the collector they have been installed.
    - Developing capital project to replace all pulse valves in plant with MAC Valves
  - Currently averaging 2 compressors shut down (125 connected HP)
  - First Phase financial impact: $68K

- Total potential Imerys North America Impact in excess of: ***14 GWh reduced*** and ***6700 Metric Tons CO2 eliminated***

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