Busch rolling mill fume control and air permits for Aluminum plants

An example of the comprehensive information in the Mcilvaine Global Decisions Orchard

Global Decisions Orchard

(reached through Free News at www.mcilvainecompany.com)

(a free site by McIlvaine)中文信息

- Home Page 主页
- Instructions 操作指南/说明 中文信息
- Decisive Classification
- Sustainability Universal Rating System
- Niche Expert System
- <u>Facilitating Knowledge Sharing Between China</u>
 & Other Countries

Global Decisions Orchard access by decisive classification

- Application
- Company/Divisions
- Corporations
- Calendar of Events
- Global Data Search
- Location
- Multiple Keyword Search
- Mcilvaine Keyword Search

- Other Subjects
- Person
- Process
- Product
- Publication
- Publication Date
- Text descriptor
- <u>Title</u>

Select Alumina in the application links

- 111000 Agriculture, Forestry, Hunting and Fishing
- 111219 Other Vegetable (except Potato) and Melon Farming
- 112120 Dairy Cattle and Milk Production
- 112511 Finfish Farming and Fish Hatcheries
- 112512 Shellfish Farming
- 211111 Crude Petroleum and Natural Gas Extraction 原油和天然气开采
- 211112 Natural Gas Liquid Extraction
- 212000 Mining & Quarrying
- 212111 Bituminous Coal and Lignite Surface Mining
- 212210 Iron Ore Mining
- 212231 Lead Ore and Zinc Ore Mining
- 212234 Copper Ore and Nickel Ore Mining
- 212299 All Other Metal Ore Mining
- 212311 Dimension Stone Mining and Quarrying
- 212321 Construction Sand and Gravel Mining
- 221111 Hydroelectric Power Generation 水力发电
- 221112 Fossil Fuel 化石燃料
- 221113 Nuclear Electric Power Generation

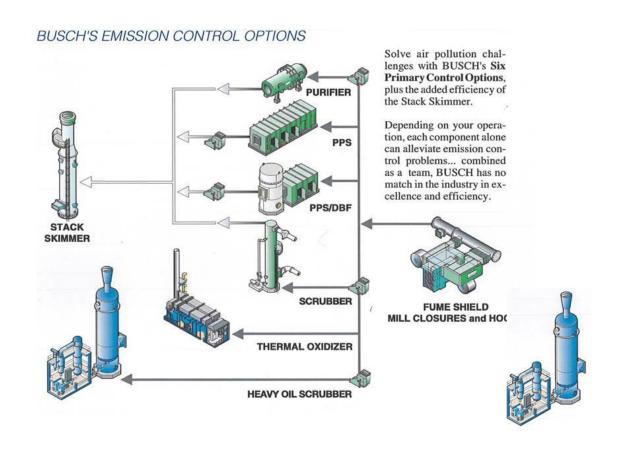
- 325312 Phosphatic Fertilizer Manufacturing
- 325412 Pharmaceutical Preparation Manufacturing
- 325630 Cosmetics Water Treatment *
- 325998 All Other Miscellaneous Chemical Product and Preparation
- 326121 Unsupported Plastics Profile Shape Manufacturing
- 326140 Polystyrene Foam Product Manufacturing
- 327215 Glass Product Manufacturing Made of Purchased Glass
- 327310 Cement Manufacturing 水泥生产
- 331111 Iron and Steel Mills
- 331313 Alumina Refining and Primary Aluminum Production
- _____
- .
- 331314 Secondary Smelting and Alloying of Aluminum
- 331523 Nonferrous Metal Die-Casting Foundries
- 332431 Metal Can Manufacturing
- 333618 Other Engine Equipment Manufacturing
- 333911 Pump and Pumping Equipment Manufacturing 泵和泵设备制造
- 334112 Computer Storage Device Manufacturing
- 334119 Other Computer Peripheral Equipment Manufacturing
- 334412 Bare Printed Circuit Board Manufacturing
- 334413 Semiconductor and Other Electronic Component Manufacturing
- 335312 Motor and Generator Manufacturing
- 335991 Carbon and Graphite Product Manufacturing
- 336111 Automobile Manufacturing 汽车制造

Articles and permits linked from Aluminum Rolling Mills

- Rolling mill oil recovery with CECO Bush systemsArticle:
- Achenbach reduces fume hood air requirement by 50% for aluminum rolling mill oil vapors
- Alcoa Davenport Works Air Permit
- Alcoa Massena Operations Title V Air Permit RenewalPermit:
- Alcoa Wenatchee Works Air Operating Permit
- Busch Foil mill hot oil scrubbing system
- Aluminum Hot Rolling mill with Busch Sysem

- There are links to information from two suppliers of rolling fume exhaust
- The other three links are to recent permit renewals for rolling mills
- These permits are often hundreds of pages in length with detailed information on existing equipment and plans
- Permits are renewed every 5 years
- Mcilvaine is continually adding the latest permits to the systek
- Only a few of these permits are linked from the free site. The rest are in N032 Industrial Air Plants and Projects

CECO-Busch emission control options



http://www.buschintl.com/Documents/Fume-exhaust/PPS-DBF.pdf

Alcoa Davenport installing new Busch purifiers in automotive aluminum expansion

Alcoa Davenport Works Air Permit

- This permit was submitted to receive approval for an automotive aluminum expansion at the Alcoa Davenport mill. The emissions limits will be met by the following changes to the existing system.
- Existing Cyclone is being replaced by with a fixed media design
- Four existing Busch purifiers are removed and replaced with two high efficiency Busch PPS Mist Elimination units
- PPS units will utilize 3 stage configuration with first stage droplet separator followed by a second stage high efficiency Busch Series 800 eliminator section

<u>Facility Name: Alcoa Inc. - Davenport Works (as displayed in Mcilvaine Industrial Air Plants and People)</u>

Address: 4879 State Street

Riverdale, Iowa 52722 **County:** Scott

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Busch heavy oil scrubbing systems used in foil mills

- A major aluminum foil manufacturer selected Busch to provide our new Heavy Oil scrubbing system for two foil mills.
- The Busch HOS system is designed to capture both mist and vapor phase emissions. The collected rolling oil is then reclaimed and returned to the mill for reuse.
- The scope of work included a complete fume exhaust system from duct connections at the mills thru the scrubber discharge stack.
- The project was made more challenging by the fact that the entire system was required to fit inside of the building in very cramped quarters.
- Busch engineering provided detail arrangement drawings for construction, and installation went very smoothly.
- The system currently reclaims large quantities of rolling oil for reuse which is a major cost advantage. Outlet emissions are well under mandated levels.
- http://www.buschintl.com/Documents/HOS-Case-History-and-Brochure.pdf

Aluminum hot rolling mill with Busch oil capture system

- The system includes Drip Resistant mill hoods which help to improve product quality. The mill enclosure includes a custom curved rollup door to facilitate easier roll changes and lift-out duct sections are included behind the mill to simplify maintenance operations.
- The lift-off hoods incorporate internal fire-protection piping and exterior ladders for access to grated top walking surfaces. The collection technology utilized low maintenance Busch Purifiers to meet emission requirements.
- The client was so pleased with the system's capture efficiency that they immediately ordered a similar fume exhaust system for a second hot mill at the same facility. This second system has just been completed with similar results
- http://www.buschintl.com/Documents/Case%20history%20-%20Alum%20Hot%20Mill.pdf

CECO locations around the world as displayed in Mcilvaine OEM Directory

- CECO Environmental NC, USA, 1
- <u>CECO Environmental / Fisher-Klosterman/ Buell Dv. PA, USA, 3</u>
- <u>CECO Environmental / Met-Pro Corp./ Dean Pump</u>
 <u>Dv./Fybroc Dv. IN, USA, 3</u>
- CECO Environmental Corporation IL, USA, 1
- CECO Environmental Corporation OH, USA, 3
- <u>CECO Environmental/ A.V.C. Specialists, Inc. CA, USA, 4</u>
- CECO Environmental/ A.V.C. Specialists, Inc. KS, USA, 1
- CECO Environmental/ A.V.C. Specialists, Inc. LA, USA, 1
- <u>CECO Environmental/ Adwest Technologies, Inc. -</u> <u>CA, USA, 4</u>
- <u>CECO Environmental/ Adwest Technologies, Inc. -</u> NY, USA, 1
- <u>CECO Environmental/ Busch International CA, USA,</u>
 1
- <u>CECO Environmental/ Busch International PA, USA,</u>
 1
- CECO Environmental/ Effox-Flextor, Inc. CANADA, 1
- CECO Environmental/ Effox-Flextor, Inc. CANADA, 2

- CECO Environmental/ Effox-Flextor, Inc. OH, USA, 9
- <u>CECO Environmental/ Fisher-Klosterman, Inc. KY, USA, 4</u>
- <u>CECO Environmental/ KBD Technic OH, USA, 1</u>
- <u>CECO Environmental/ Met-Pro Corp./ Fybroc &</u>
 Sethco Division PA, USA, 3
- <u>CECO Environmental/ Met-Pro Corp./ Keystone</u> <u>Filter Div. - PA, USA, 6</u>
- <u>CECO Environmental/ Met-Pro Environmental Air Solutions OR, USA, 2</u>
- <u>CECO Environmental/ Met-Pro Environmental Air</u>
 <u>Solutions PA, USA, 1</u>
- <u>CECO Environmental/ Met-Pro Envr. Air Solutions/</u> Duall Division - MI, USA, 7
- <u>CECO Environmental/ Met-Pro Envr. Air Solutions/</u> <u>Flex-Kleen Div. - IL, USA, 6</u>
- <u>CECO Environmental/ Met-Pro Envr. Air Solutions/</u>
 <u>Systems Div. PA, USA, 1</u>
- (Aarding Divisions being added as a result of mergers. Peerless, Zhongli, SAT and CCA will also be added)

CECO –Busch Details

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http://www.buschintl.com/

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Mcilvaine Service	product
Air Handling	DAMPERS
Fabric Filter	CARTRIDGE FILTERS
Fabric Filter	FABRIC FILTERS
Fabric Filter	HIGH EFFICIENCY
Wet Scrubber	ADSORPTION
Wet Scrubber	MIST ELIMINATORS

Mcilvaine reports on Busch technology in the fabric filter, scrubber, adsorber and other newsletters