

# **AL-6XN® & ZERON® 100 – Proven Experience in FGD Pollution Control Systems**



**Devin Wachowiak**

**Rolled Alloys – Temperance, MI**

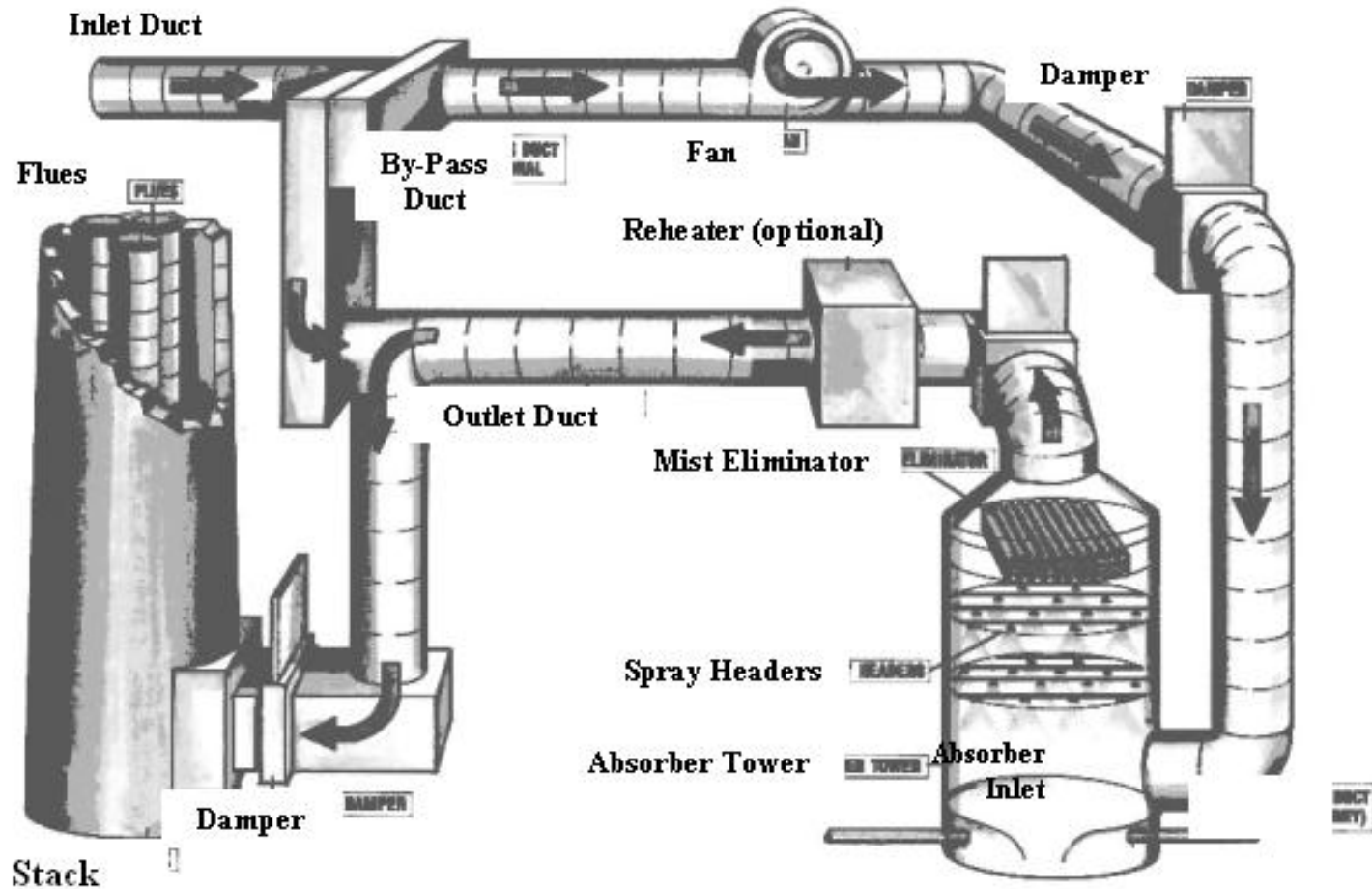
**Applications Engineer**

# Chemical Composition

<b>Alloy</b>	<b>Chromium</b>	<b>Nickel</b>	<b>Molybdenum</b>	<b>Nitrogen</b>	<b>PRE(N)*</b>
<b>317LMN</b>	<b>17.0</b>	<b>13.0</b>	<b>4.2</b>	<b>0.15</b>	<b>33</b>
<b>2205</b>	<b>22.1</b>	<b>5.6</b>	<b>3.1</b>	<b>0.14</b>	<b>35</b>
<b>ZERON 100</b>	<b>25.0</b>	<b>7.0</b>	<b>3.6</b>	<b>0.30</b>	<b>41</b>
<b>AL-6XN</b>	<b>20.5</b>	<b>24.0</b>	<b>6.3</b>	<b>0.22</b>	<b>45</b>
<b>C-276</b>	<b>15.5</b>	<b>57.0</b>	<b>15.5</b>	<b>0.0</b>	<b>66</b>

\*PRE(N) = %Cr + 3.3x%Mo + 16x%N

# FGD Schematic



# FGD Material Selection Chart

		Mild	Moderate		Severe		Very Severe		
Cl - ppm		500	1,000	5,000	10,000	30,000	50,000	100,000	200,000
Mild	pH 6.5	S31603	S31726		S32760 S32550		N08367	N10276	
Moderate	pH 4.5		N08904						
Severe	pH 2.0	S31726	S32205						
Very Severe	pH 1.0	S31726 N08904	N08367						

# FGD Coupon Tests



**S31603**



**S31726**



**S31803**



**6-Mo**



**N10276**

**Results of exposure to ~70,000 ppm chlorides at a pH of 5.6 and a temperature of ~130°F. Test performed at Orlando Utilities' Stanton Energy Center in Florida**

# AL-6XN FGD Experience

<b>Client</b>	<b>Project</b>	<b>Component</b>	<b>Installation</b>
Westar Energy	Jeffrey Energy Center	Duct Work	2007
NIPSCO	Bailly Generating Station	Many	1997+
LG&E	Cane Run Station #5 & 6	Many	1990+
KEPCO	Taeon & Hadong Units	10 Absorber Towers	1998+
IP&L	Petersburg Station	Duct Lining / Absorber	1990's
Ameren	Newton Power Station	Turning Vanes	1990
Duke Energy	Zimmer Station	Bypass Ducts	2004
New Brunswick Power	Coleson Cove Power Plant	Beams / Collector Plates	~2004
Minnesota Power	Boswell Station	Inlet Ductwork	2008
Hoosier Energy	Merom Generating Station	Absorber Lining	2009



# AL-6XN FGD Experience



**AL-6XN Slurry Piping for NIPSCO Baily Station**

# AL-6XN FGD Experience



**AL-6XN Bypass Duct Wallpapering at IP&L**



# AL-6XN FGD Experience



**AL-6XN Turning Vanes at Newton Power Station**

# ZERON 100 FGD Experience

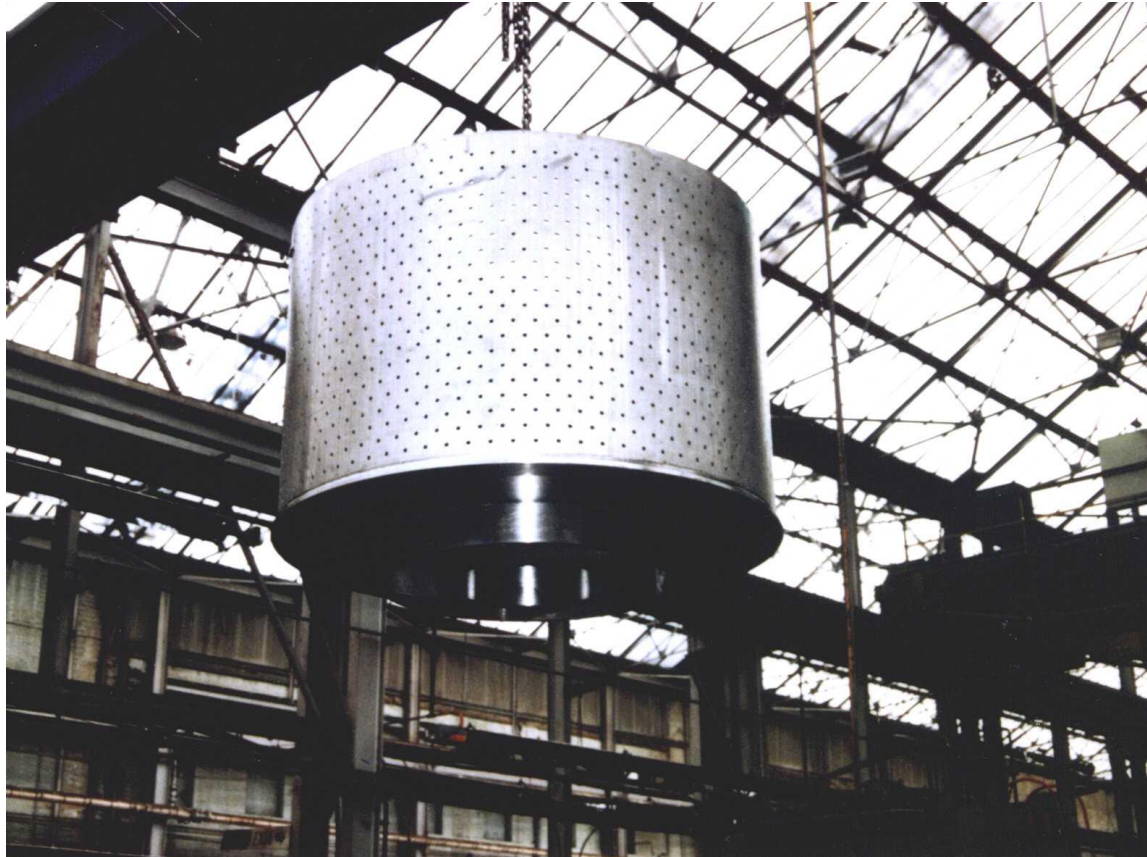
<b>Client</b>	<b>Project</b>	<b>Contractor</b>	<b>Component</b>
Powergen	Ratcliffe Station	John Brown	Flow Distributor Plates
C.E.G.B.	Drax	Babcock	Slurry Pumps
Broadbents	Drax	Babcock	Gas Distributor Plates
C.E.G.B.	Drax	Babcock	Agitator Stools
Envirotech	Various	Various	Pumps
Broadbent Mixers	Various	Various	Agitators
Lightnin Mixers			
Plenty Mixers			
Munters	Tampa Electric	Munters	Mist Eliminator

# ZERON 100 FGD Experience



**ZERON 100 Impeller for Drax Power Plant Slurry Pumps**

# ZERON 100 FGD Experience



**ZERON 100 Baskets for Ratcliffe FGD Centrifuges**

# ZERON 100 FGD Experience



**ZERON 100 Guillotine Damper for Texas Power Plant**

# Thank You!

**Devin Wachowiak  
Applications Engineer**

**Rolled Alloys  
125 West Sterns  
Temperance, MI 48182**

**Email: [dwachowiak@rolledalloys.com](mailto:dwachowiak@rolledalloys.com)**

**Toll Free: 877-515-5267**

**Fax: 734-847-3915**

**[www.RolledAlloys.com](http://www.RolledAlloys.com)**

