

PRODUCTS AT WORK

PACKAGED WET SCRUBBER SYSTEMS

Packaged Scrubber System Fills The Need In Charlotte, Michigan

Background

With an expanding population base in the outlying areas surrounding Charlotte, Michigan the City concluded that their existing methods of ozone treatment and rotating biological contactors (RBC) were inefficient in treating H₂S odors at their wastewater treatment facilities. Enlisting the aid of the engineering firm of Capital Consultants, the City of Charlotte set out to find a more efficient and effective means of odor control. After a thorough review of the facility and its processes, it was determined that wet scrubbing technology would be the most practical and effective means of eliminating this offensive odor. **With 37 years of design and manufacturing experience** in the air pollution control industry, **Duall Division, Met-Pro Corporation of Owosso, Michigan** was selected as the equipment manufacturer for this project.

Results

Two systems were required for this project. The first system, located inside the Odor Control Building, utilizes a **Duall PT512MD-15 Multi-Directional scrubber**. The multi-directional design minimizes the overall height for inside installations with restricted height requirements. This scrubber is designed to treat an air stream 12,900 SCFM containing 10 ppm of H₂S. System 2, located in the Screening Building, included a **Duall PT512MD-3 Multi-Directional scrubber** designed to treat an air stream of 2,600 SCFM containing 20 ppm of H₂S. Tested and proven

H₂S removal for each system is 99.9%. To achieve these levels, each scrubber uses high efficiency packing with integral mist eliminator and chemical oxidation for complete destruction of the H₂S. Both scrubbers were constructed of **DUALLast™** fiberglass with an inner PVC liner, which provides the best combination of superior corrosion resistance and structural integrity.

DUALLast™ construction with its PVC corrosion barrier offers the widest range of corrosion resistance to acids, alkalis, and oxidants often utilized with complex wet scrubber chemistries. **DUALLast™** equipment provides superior resistance to highly corrosive hypochlorous acid that may develop unintentionally during upset conditions if the pH of the scrubbing liquor drops significantly. The PVC liner provides a durable, long lasting corrosion barrier that is consistently 8 to 10 times thicker than conventional fiberglass resin rich barriers with synthetic veils.

Both systems were factory packaged and skid mounted to facilitate installation and minimize contractor costs.

Present Status

The systems were put into service in August 2001, and continue to operate as designed. Each packaged system also included Duall NH series fiberglass exhaust fans, instrumentation, chemical metering pumps, PVC duct, exhaust stacks, chemical storage tanks, and NEMA 4X control panels.



▲ 12,900 cfm PT512MD-15
▼ 2,600 cfm PT512MD-3



Application: H₂S Odors

End User: City of Charlotte, Michigan

Reference: 3557-01

Engineer: Capital Consultants,
Lansing, MI

**Duall PT-MD Packaged
Scrubber System
DUALLast™ FRP Construction**



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