

# TECHNA-DUC® CASE STUDY

## MANUFACTURING FACILITY



Failed duct insulation causes shutdown, lost production  
Techna-Duc improves efficiency and reliability



# TECHNA-DUC® CASE STUDY MANUFACTURING FACILITY

Unit Shutdown Costing \$80,000 Per Day Production Loss



## The Situation: Replace Rooftop Exterior Ductwork

**Newark, DE 2010** – A large manufacturing facility chose to install a fiberglass insulation and aluminum jacket system on 12,600 sq. ft. of rooftop exterior ductwork. This factory also considered the Techna-Duc system, but decided to go with a different proposal that was \$5000 less.

## The Challenge:

Within a year the facility discovered that rainwater leaked through the jacketing seams and protrusions. This defect reduced the insulation's performance value (wet insulation performs worse than no insulation) and increased energy costs. Unfortunately, budget constraints prohibited the facility from removing and replacing the water-logged ductwork.

After four years the HVAC unit shut down due to excessive moisture in the air system, costing the facility \$80,000 per day in lost production until repair and replacement could be done.

## How did the Techna-Duc solve this issue?

### What was the outcome?

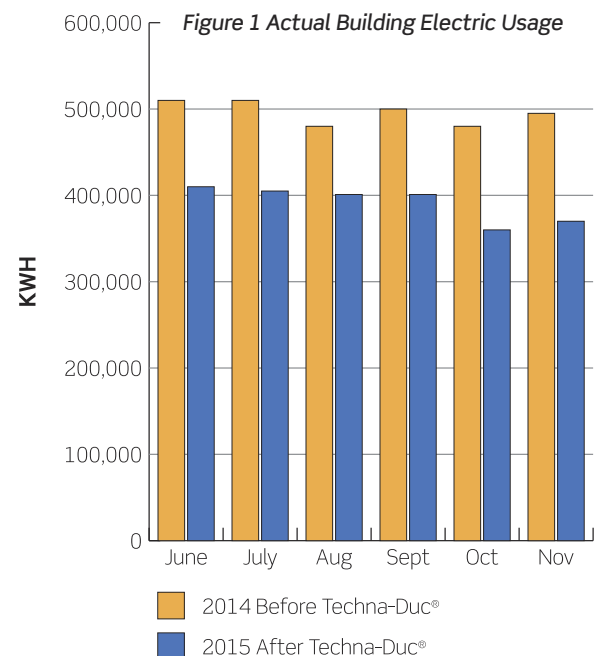
The failed insulation was removed and replaced with a high-quality, water-tight Techna-Duc system with 20-year warranty. The facility resumed operations and experienced the energy savings shown in Figure 1.

## The Results – 12,600 square feet of Techna-Duc® have yielded savings of:

105,000 kW/hrs saved monthly  
At \$0.11/kwh = \$11,500 monthly  
Annual savings = \$136,000  
20 Year ROI = \$2.72 million projected

## Looking Forward:

- ◆ HVAC Unit Shutdowns Eliminated
- ◆ HVAC Unit Runtime Decreased
- ◆ 20 Year Limited Warranty
- ◆ No Maintenance
- ◆ No Replacement Costs
- ◆ No Headaches





## TECHNA-DUC® MANUFACTURING FACILITY CASE STUDY

### Before Techna-Duc® Insulation Failure • Loses Money



*Is this what is on your roof? How much does this cost you?*

#### Original Insulation System

- ◆ Fiberglass Insulation
- ◆ Field Fabricated
- ◆ Thin Jacket (.016" Thickness)
- ◆ Rivet Fasteners
- ◆ Regular Maintenance Required
- ◆ Susceptible to Moisture Intrusion
- ◆ R-6 Installed Thermal Value
- ◆ 1 Year Contractor Warranty

### After Techna-Duc® 20 Year Warranty • \$2.72M in energy savings



*Are you ready for the SOLUTION?*

#### Techna-Duc® Insulation System

- ◆ Shop Fabricated
- ◆ No Maintenance Required
- ◆ Interlocking Joint System
- ◆ Water Tight Triple Sealed
- ◆ Extremely Durable
- ◆ > 20% Energy Savings
- ◆ R-16 Installed Thermal Value —  
*166% Higher Than R-6*
- ◆ 20 Year Limited Warranty



**Gary Banks** is the President of the Banks Industrial Group (BIG). Since 2003, BIG has kept industrial facilities across the northeast operating efficiently, reliably and safely through their preventative and corrective maintenance services. Visit us at [www.banksindustrial.com](http://www.banksindustrial.com) to learn more about how BIG can help you solve your industrial problems.



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