



CASE STUDY

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# Efficient, dust free drying of filter cake for a Dye industry major



# Using a continuous horizontal Thin Film Dryer to efficiently dry wet cake to make dust free powder

Case Study | Paints & Dyes Industry

A client was using a batch paddle dryer under vacuum for drying of filtered dye cake. The paddle dryer was already a norm in the dyes industry. It took 6 hours for drying, produced a lot of dust during discharge of dye powder in one lot, and the powder contained grits which required milling as the downstream step.

Technoforce suggested a **horizontal Agitated Thin Film Dryer (ATFD H)** as a possible alternative, which could address some of the problems. A trial was conducted in the **Technoforce Pilot Plant**. A special feeder was used to handle the **thixotropic cake**.

The trial showed a lot of surprising results. As against operation of paddle dryer under vacuum, the ATFD H could give good quality material without vacuum. This was possible due to contact time of a few seconds in ATFD H against that of several hours in a paddle dryer. Also, the powder from ATFD H was free from grits thus eliminating the downstream step of dry milling. The continuous discharge of powder was easy to pack without causing dusting.

The first dryer was commissioned in 1992 and is in trouble free operation since then. A repeat order was placed in 1994.

[www.technoforce.net](http://www.technoforce.net)

## Our Expertise

Evaporation

Drying

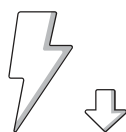
High Vacuum Distillation

Extraction

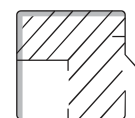
Crystallization

Zero Discharge Systems

**TECHNOFORCE™**



**50 %**  
Less power required



**25 %**  
Less Area required



**30 %**  
Less operating cost