



Project Review

Nestlé Mexico - Toluca Project

33MW_{th} Bubbling Fluidized Bed (BFB) Boiler

Client: Nestlé
Location: Toluca, Mexico

Background

Nestlé is a world leading food company with nearly 500 factories distributed in 86 countries and 283,000 employees worldwide.

Generating a significant by-product stream of spent coffee grounds, Toluca factory (approximately 100km from Mexico City) required an environmentally efficient method of disposing of this material.

At the time of commissioning Toluca factory was Nestlé's largest instant coffee factory worldwide.

The Solution

The contract scope included design and supply of boiler plant components, supervision of erection, installation and commissioning on site.

To successfully incinerate the high moisture biomass fuels Windsor, then RCR, proposed a bubbling fluidized bed (BFB) designed by RCR Energy under license from Babcock & Wilcox Power Generation Group Inc, USA:

- Open hopper bottom bubbling fluid bed (BFB) combustor;
- Very high efficiency boiler with economiser;
- Recuperative air heater; and
- Particulate emission control using Electrostatic Precipitator.

This boiler is the largest coffee-fired boiler within Nestlé to date.





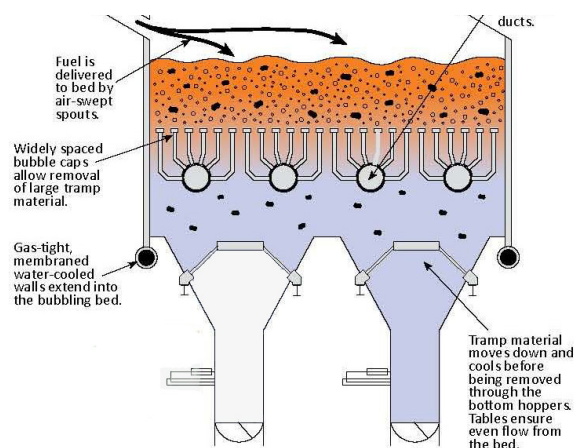
Why Windsor Energy?

As a proven supplier of plant and services to Nestlé worldwide, Windsor offered the following advantages:

- The ability to work internationally and integrate smoothly with local project partners.
- Proven supplier record with Nestlé Group and other large industrial clients.
- Innovative plant design for high efficiency and simple operation.
- Modular plant design optimised for safe and simple shipping and erection.
- Clean burning biomass combustion technology with very low emissions.

Project Name	Nestlé Toluca, Mexico
Project Number	7143
Date Installed	2012
Boiler Type	B & W Towerpak® with BFB Boiler
Combustion System	Bubbling Fluidized Bed (BFB)
Thermal Capacity	33 MW
Fuel Source	Spent Coffee Grounds
Boiler Design Code	AS 1228
Steam Output	50000 kg/h
Steam Temperature	220°C (Saturated)
Design Pressure	2700 kPa
Operating Pressure	2200 kPa
Feedwater Temperature	103°C
Emissions Guarantee Particulates	< 60 mg/Nm ³ @ 6% O ₂
Turn Down	4:1

Typical B&W Bubbling Fluidized Bed



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