

Tissue mill, Pune

A Jetomat® on the Yankee since 1998

A large tissue paper mill in Pune has run a variable-nozzle Jetomat® on the steam supply of its Yankee cylinder since 1998. It takes the Yankee's blow-through steam back into the cylinder, so the Yankee drains at speed and the steam is used again.

1998

Jetomat in service since
on the Yankee's steam supply

DN 100

Baelz 590, PN 25
variable nozzle

14 bar g

motive steam
does the pumping

2017

like-for-like Jetomat
ordered after nearly two
decades

01 The plant and the duty

PLANT	A large tissue paper mill, Pune, India
MACHINE	Tissue machine, Yankee cylinder
MOTIVE	14 bar g steam
SUCTION	The Yankee's blow-through steam, from the condensate separator
EQUIPMENT	Variable-nozzle thermocompressor Jetomat® (Baelz 590, DN 100, PN 25) with pneumatic actuator

02 The challenge

A Yankee is one large steam-heated cylinder. Unlike a dryer section, no lower group takes its blow-through: all the steam that passes the cylinder with the condensate has to come back to it, or it is lost. When it cannot all come back, the Yankee floods and the sheet dries unevenly.

03 The solution

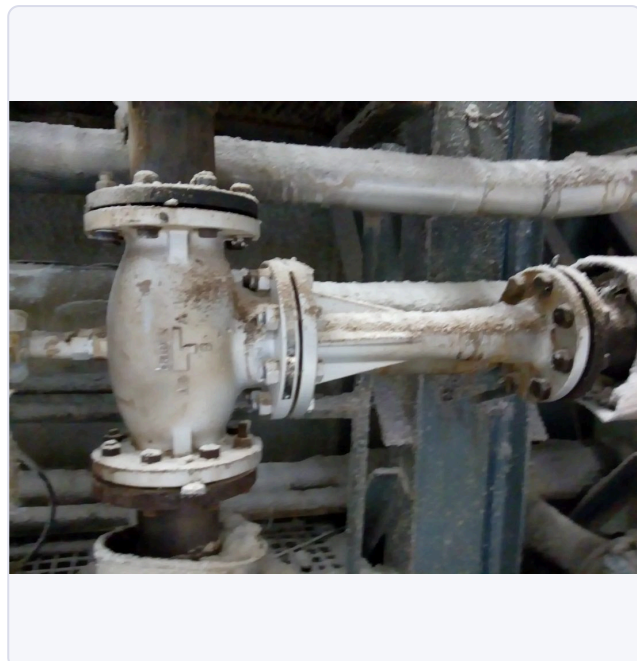
- Motive steam at 14 bar g enters the Jetomat's nozzle and does the pumping.
- The Yankee's condensate goes to a condensate separator. The blow-through steam from the separator is drawn back by the Jetomat and mixed with the motive steam: the recirculation of the Yankee's own steam.
- The mixed steam goes back into the Yankee at the pressure the machine needs.
- A pneumatic actuator (Baelz 373-P22) with an I/P positioner moves the nozzle spindle, so the motive-steam flow follows the load instead of throttling it.

04 A long service life

- **1998:** the Jetomat goes into service on the Yankee.
- **2009:** Baelz issues the unit's rating table across the Yankee's working pressures.
- **2017:** after nearly two decades, the mill orders a like-for-like Jetomat, built to the existing flange dimensions so it drops straight into the same line.

05 The hardware

Item	Detail
Thermocompressor	Baelz 590, DN 100, PN 25, variable nozzle
Nozzle and diffuser	33 mm special nozzle, special diffuser sized for the Yankee duty
Body and diffuser	Ductile cast iron (GJS-400-18-LT); plug, spindle and nozzle in stainless steel
Actuator	Baelz 373-P22 linear pneumatic actuator, 40 mm stroke
Positioner	Baelz 86/IP8000, 4–20 mA, explosion-proof
Motive steam	14 bar g



The Jetomat body and diffuser in the Yankee's steam recirculation line at the mill.

06 Why it works

The Jetomat is a steam jet thermocompressor: high-pressure motive steam expands through the nozzle, draws in the low-pressure blow-through steam and recompresses the mixture in the diffuser. Because the nozzle is variable, one unit follows the Yankee from warm-up through full speed and back down on a sheet break.

On a Yankee or an MG cylinder, the blow-through has nowhere else to go. A variable-nozzle Jetomat brings it back under control and keeps the cylinder draining at speed, and on this tissue machine it has done so for more than 25 years.