

Tyre maker's press hall

15,000 kg of press exhaust steam reused every day

Two Jetomat® (Baelz 590) units collect the curing presses' exhaust at 1 bar a and deliver it, mixed with 7 bar g motive steam, at 0.7 bar g to the plant's low-pressure heat consumers.

15,000 kg**exhaust steam reused a day**

instead of vented

Rs 65 lakh**a year**

~Rs 23,200 a day over 280 working days

≈ 6 months**payback**

for the two Jetomat installations

0.7 bar g**to low-pressure users**

from 1 bar a exhaust

01 The plant and the duty

PLANT	Tyre maker's curing-press hall (a global tyre maker)
MOTIVE STEAM	7 bar g
PRESS EXHAUST	1 bar a, collected in a DN 500 header
EQUIPMENT	2 × Jetomat® (Baelz 590) DN 125, variable-nozzle thermocompressors
DELIVERED	0.7 bar g to low-pressure heat consumers

02 Before

After each press loop, the exhaust steam at 1 bar a went to atmosphere.

03 What changed

- All press exhaust steam is collected in a DN 500 header.
- Two Jetomats DN 125 mix it with 7 bar g motive steam and deliver 0.7 bar g steam to the low-pressure heat consumers.

DESIGN POINT, PER JETOMAT

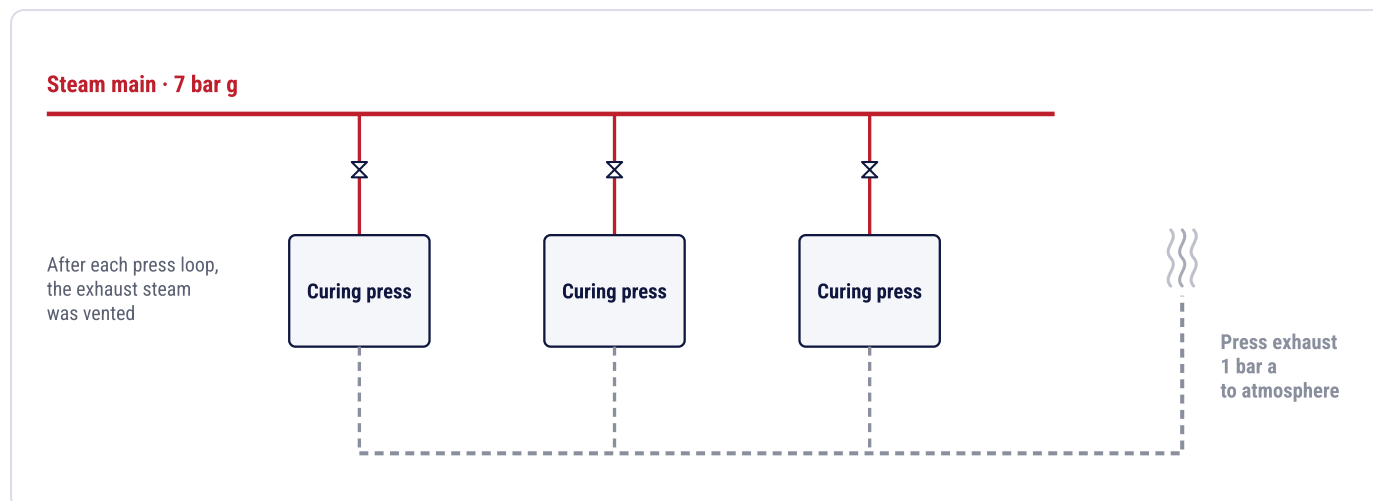
	Motive	Suction	Discharge
Pressure	8 bar a	1 bar a	1.7 bar a
Flow	800 kg/h	611 kg/h	1,411 kg/h

04 Results

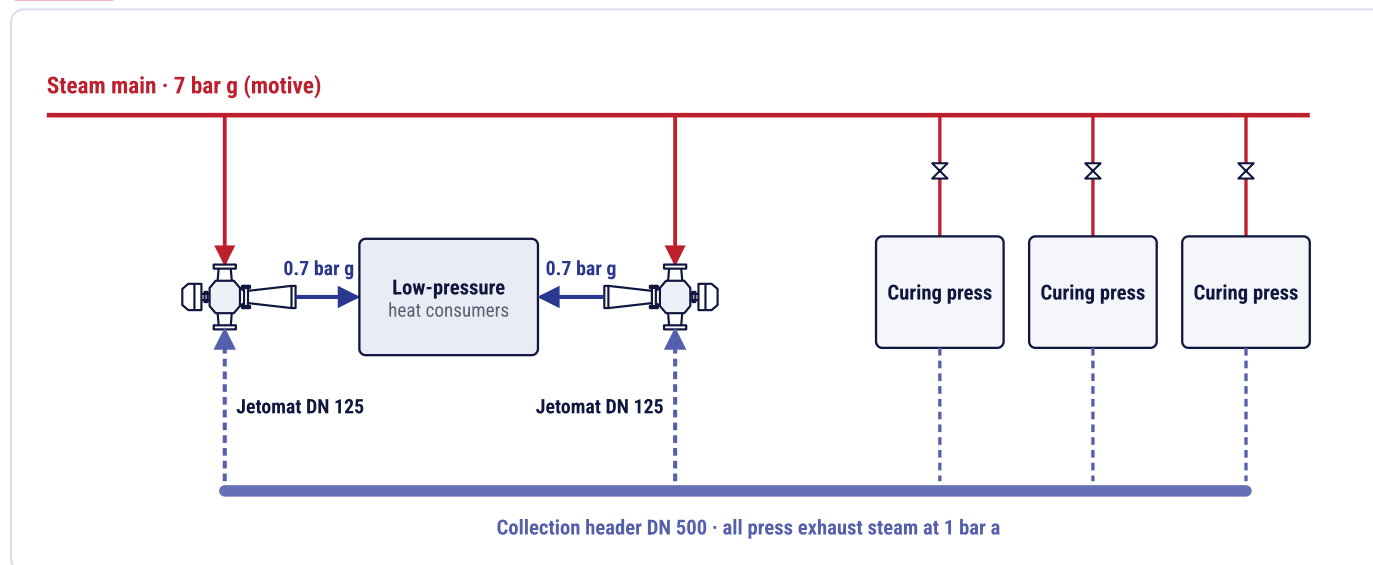
- 15,000 kg of press exhaust steam reused every day instead of vented.
- The low-pressure heat users now run partly on recovered steam.
- At the 1995 steam price of about Rs 1,550 per tonne, the 15,000 kg/day reused was worth about Rs 23,200 a day, or about Rs 65 lakh a year over 280 working days; the two Jetomat installations paid back in about 6 months.

05 The steam system, before and after

BEFORE



AFTER



— Live steam — Recirculated / recovered steam - - - Press exhaust steam, 1 bar a - - - Steam lost to atmosphere ✕ Valve

Jetomat (variable nozzle)

06 Why it works

Press exhaust at 1 bar a is below the pressure any heat user can take. The Jetomat uses the pressure energy of the 7 bar g motive steam to entrain the exhaust and deliver the mix at 0.7 bar g, a pressure the low-pressure heat consumers can use. At the design point, each Jetomat takes 611 kg/h of exhaust with 800 kg/h of motive steam and delivers 1,411 kg/h.

SOURCE Baelz installation record.