Matrasur

RTM PRODUCTION LINE

THE MATRASUR RTM CONCEPT

This low pressure, semi-automatic, cyclical production process for the manufacture of parts using composite materials utilizes the combination of MATRASUR Composites vast experience and the very latest technology.

The new RTM CONCEPT from MATRASUR is a unique production line package which embodies advanced technologies to guarantee quality, optimise throughput, maximise control of the RTM operation, allow precise costings to be produced and ensure compliance with increasing environnemental constraints.

Utilising its considerable expertise in the composites industry, MATRASUR tailors the RTM CONCEPT to suit individual production requirements by linking together proven control, production and handling techniques as a complete co-ordinated system. Each system is thoroughly tested under production conditions prior to installation, eliminating the need for time-consuming production trials, avoiding teething problems and ensuring cost-effectiveness from day one.

With the RTM CONCEPT, companies no longer need to carry out their own research and development – MATRASUR undertakes this on behalf of customers and delivers a proven RTM solution backed-up with a complete technical support and maintenance programme.

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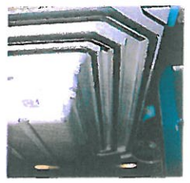
Automatic gun

It is fixed in place on the male mould. Injection and cleaning are automatic.



Advanced technology mould sealing

Mould closing and injection under vacuum.

Digital display

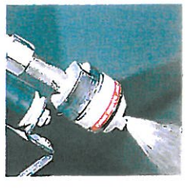
Controls, monitors and displays consumption of raw materials at all times (in kg/item, kg/minute and kg/day).

Mould rotation

Ensures the mould is always closest to the extraction system, thus providing operator safety. Baffles separate Gelcoat solvent from pigment to eliminate filter blockage.

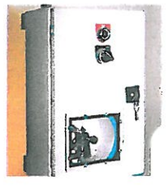
Needleless gun

Impossible for resin or Gelcoat flow to be out of phase with that of the catalyst when starting or stopping spraying.
Provides greater precision.



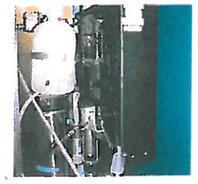
Air assist nozzle

Eliminates porosity in the Gelcoat during rapid curing, due to the very low spray pressure.



Catalyst detector

If the catalyst percentage varies from its setting the gun is automatically shut off and flushed.

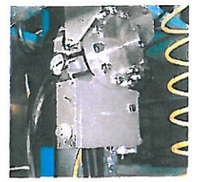


Injection equipment

Low pressure, double acting, positive displacement pump which provides a constant flow.
Pneumatic motor with specially hardened hydraulic cylinder to withstand filler abrasion.

Multi-colour Gelcoater

Colour changing without material loss, flushing or stopping production.



Heater

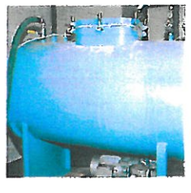
Variable temperature control heater with display is situated close to the spray-gun and ensures year-round continuity of Gelcoat viscosity and optimises product surface finish quality.

Mould temperature control

Reduces gel times and optimises production cycles regardless of factory temperature.

Mould flexibility

In the case of moderate production rates the system can operate using only one male and female mould.



Special resin tank

Filling, mixing and degassing is under vacuum and fillers are kept in suspension prior to pressurised dispensing..

Control cabinet

The automatic system controls all of the operations.
A manual override allows fine tuning and adjustment of the process.

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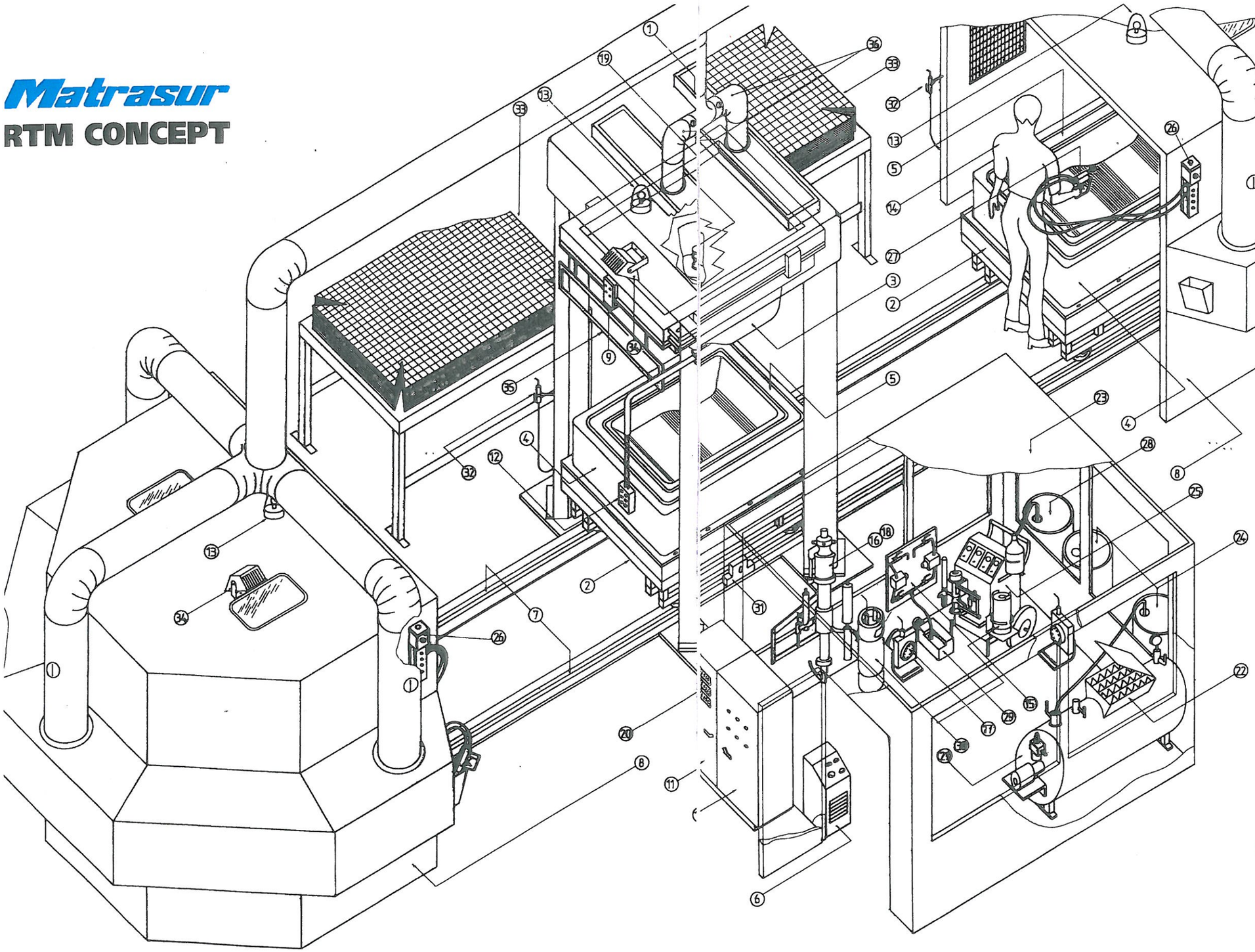

1. Mould manipulation and pressing system
2. Rotational mould carrier
3. Thermo-regulated male mould
4. Thermo-regulated female mould
5. Advanced technology mould sealing technique
6. Thermo-regulation unit
7. Carriage rails
8. Gelcoat booth
9. Quick change system for male mould
10. Pneumatic control cabinet
11. Electrical control cabinet
12. Easy reach control unit of the pressing
13. Indicator light
14. Operator
15. Vacuum regulation panel
16. Low pressure injection and casting unit
17. Resin heater
18. Catalyst alarm
19. Automatic injection gun head unit
20. Material monitoring system (kg/min., kg/part, kg/day)
21. Mixing, holding and air bubble removal vessel
22. Bag slitting system
23. Equipment enclosure
24. Resin drums
25. Low pressure Gelcoat spraying unit
26. Gelcoat heaters
27. Needleless Gelcoat spray-gun
28. Gelcoat drums
29. Vacuum pump
30. Pressurised container for flushing
31. Carriage locating device
32. Pneumatic cleaning guns
33. Pre-cut sheets of glass fabric
34. Gelcoat booth lights
35. Personnel safety bars
36. Extraction unit

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World leader in special Tools, Equipment and Installations for the reinforced plastics industry.