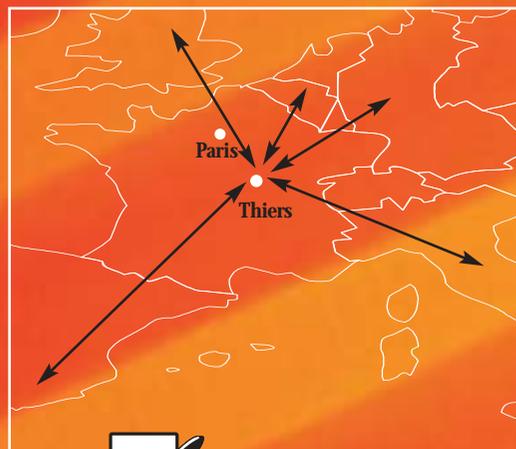




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Clermont-Ferrand CFE



Vichy



Lyon/Geneve, Barcelonne,
Paris, Bordeaux.

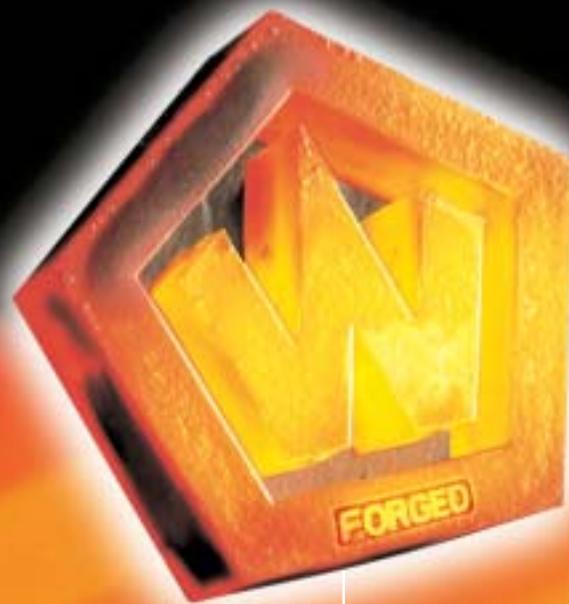


version 2000
en cours



Wichard recycles the water from its processes and purifies its waste on site.

Safety begins with a W



www.wichard.com

Precision forging



Safety begins with a W



1

How do you become a blacksmith?



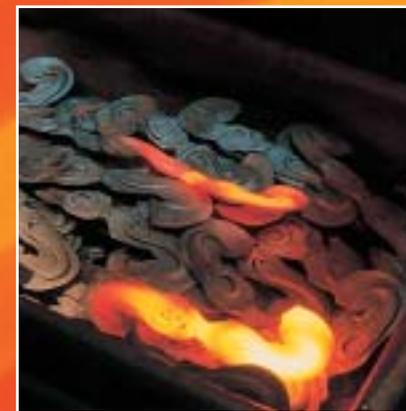
In Thiers, capital of metal-working, the tradition goes back to the Middle Ages. Here, we know what is to have a love for work well done.

So it was here, on the banks of the Durole, that the young engineer Henri Wichard naturally chose to found his own forge in 1919, with one idea : to adapt great precision to the production of small items.

Up to that time, the forging technique had been used only for large, heavy items. The factory site now employs 130 people and, every year, delivers over 10 millions forged items to more than forty countries. Everything is done - the conception, the production of tools, forging, finishing, polishing and machining – to ensure that all our customers receive the level of quality that has forged our reputation.

The steel used by the blacksmith is naturally welded during rolling out. This creates an internal structure of the metal characterized by the alignment of the grain into fibres. The blacksmith's art is to align these fibres in the direction of the stress. He can then form pieces in a shape that maximizes strength while optimising the material used. Forging guarantees the internal cohesion of the metal, free of air-bubbles and defects. Forged metal products bend or stretch long before breaking, which makes them ideal for safety equipment. Compared to other processes, the results are spectacular.

The blank of steel is heated to over 1000° to make it malleable. By dropping the mass of the hammer, the metal moves along, making it creep into the die cavities to give the item its final shape. The excess (burr) is cut off.



fibre orientation



investment cast copy



forged by wichard

the forging expert

Equipment

2

Tools

3

Applications

4

2

E q u i p m e n t

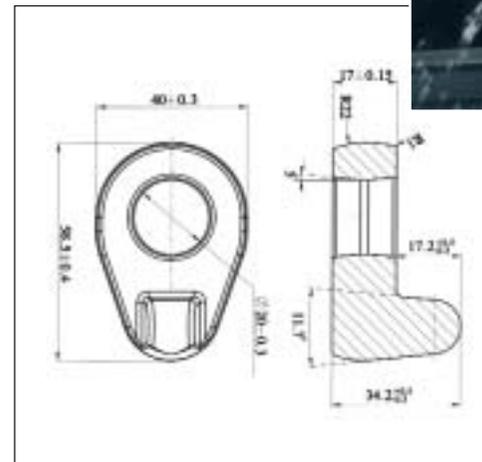


12 hydraulically powered inertia drop hammers, items from 1 to 500g (up to 1 pound), small and medium-size production runs. Two automatic, double-action forging machines for very long runs. Hydraulic and mechanical presses. Tribo-finish workshop, machining.



Ongoing quality control throughout the process, spectrograph to analyse the materials, tensile test machine, liquid penetrant inspection, salt spray test, ISO 9001 certification.

Wichard makes all its own tools. The computer-assisted design is taken over by digitally operated machines. (machining and electroerosion.)



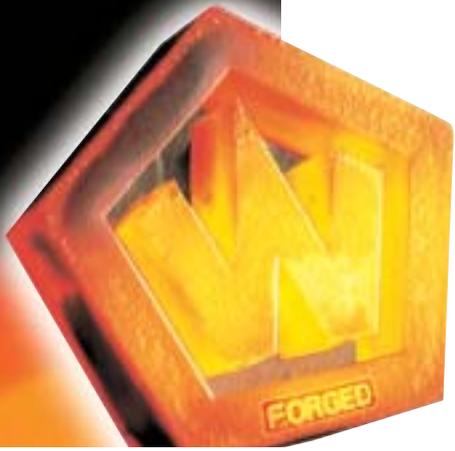
Design :
Projects are completed via an ongoing dialogue between our engineers and customers, (Pro-engineer files). From a simple blank to a finished unit, short or long production run, Wichard provides global solutions adapted to needs: machining, (integrated for very large runs), heat treatments, polishing, surface coating, etc...



Materials :
Alloy steels, stainless steels, titanium, light and copper alloys.

4

Applications



Parachute



Rings, adjusters, hooks, standard or to specifications, these are safety items that have to be forged.



Medical

Wichard is a leading European supplier of hip forgings. (stainless steel or titanium).



Marine

World leader, thanks to the quality of its forged shackles and snaps, Wichard exports to over 40 countries. Its catalogue products have a vast number of industrial applications (handling, safety, building, etc.).



Automotive

A recognised partner of the automotive industry for large production runs, automatic forging machine and integrated machining.



Développons ensemble

Other applications

Present in all areas where there is a concern for quality : outdoor, building, security keys, military, handling, aeronautics...

