FASTOOL

Do you know how the thousands of plastic objects that surround us in daily life are made? This push button on a can of shaving foam for example? Or that electric socket? They are moulded. Liquid plastic is injected into metal moulds like this one in very complicated shapes. A unique mould must be carved to correspond to each object. The market is enormous.

ITW :
Kees De RUYTER
Managing Director NEKOFA
VIANEN = NETHERLAND
« I manage a company that manufactures this kind of mould which is used to make plastic objects, but which also manufactures computer keyboards, this mouse or this telephone … the kind of plastic object we encounter every day by the million. »

To be competitive, we had to find a way to make these tools fast »)

ITW :
Julia MOORE
GTMA = United Kindom
« The tooling and mould manufacture industry is a very competitive sector of activity on an international scale with international clients.

To cope with this, the European Fastool project is a collective research project carried out by institutions representing 38 SMEs all over Europe.

Fastool comprised the United Kingdom, Germany, the Netherlands and Spain.

In the Netherlands, IAG metaalunie represents 9 SMEs
in Germany, NC Geselschaft represents 10 SMES
in Spain, ASCAMM represents 6 SMES
and in the United Kingdom, GTMA represents 13 SMES

The research and development network also extends to the TNO centre in the Netherlands, IPT Fraunhofer Institute in Germany, FATRONIK in Spain and the CRDM in United Kingdom.

The total FASTOOL budget was € 3 516 000 – the European Union contributed € 1 757 000.

ITW :
Julia MOORE
GTMA = United Kingdom
«The project is looking at the applications in modernising the facilities and skill bases and reducing programming times. The role of the trade associations in Spain, Germany, the Netherlands and in the UK is to disseminate this knowledge on best practice techniques and technologies out to the SME community on this panEuropean research project …»

Concretely speaking, this kind of graphite blank is used to make the moulds. A machine has to be programmed to shape this kind of object this kind of object, and until recently today that took time…

ITW
Han Oosterlink

TNO Science and Industry

“What we have done, is to reduce the programming time. For an object like this one, it takes about three hours of programming and we have cut that down to three minutes. This is a fantastic

improvement because the people who are doing this, the people who can programme these machines are very scarce. So if you manage to reduce the time they spend programming, this is a great advantage. »

ITW
Steve Hobbs

TIX
Dillan Bevan
Software developer CRDM

ITW
Stéphane MOUTON
“Manufacturing a complex mould involves various machines in the workshop. The blank, meaning the piece that is going to be tooled, is set up on a palette carried by the yellow monorail from one machine to another in the workshop. The machine is supplied by a cable system in our case because of the height of the monorail, but in other situations a telescopic arm could be used to feed the machine. ...
Not all machines can be supplied from above. That's why a robot has been developed to supply them from the side. This manipulator can put the palette inside the robot. It will also make it possible to turn it and to introduce an electrode inside the EDM machine. Now, imagine that you are the machine, the robot is going to bring your palette."
ITW
Chris Bockin
Project Technical Coordinator CRDM

ITW :
Kees De Ruyter

“The most important thing is that with this system we can keep the development of this plastic items here in Europe. That means that we can also keep the fabrication of the moulds here too. Even if it implies the use of expensive machines and skill workers.”