



PHENOMENAL SAVINGS

Dunlop, the world-renowned Tyre manufacturer, introduces its new high performance tyres SP Sport Maxx. “With this tyre, we are bringing motor sport technology onto the road, allowing the maximum experience in sporty driving,” is how Dr. B. Löwenhaupt, Technical Director of the Dunlop Development Center Hanau (DDC) explains the new model.

► DUNLOP GMBH & CO. KG

Maximum quality is achieved mainly by perfectly harmonised processes. Reliable partners who have outstanding expertise in relevant fields are a prerequisite here. For this reason, when it comes to CATIA (V4/V5), Dunlop relies on CENIT as a consultant of many years’ standing in the field of Product Lifecycle Management (PLM) and IT.

Since the beginning of the 90s, Dunlop has been relying on the functions of the PLM solution CATIA. “We established very early on that we wanted to work with a CAD system that was a standard in the automotive industry,” said Boris Nitsch, Head of Development Services at Dunlop of the CAD strategy. Given this requirement, CATIA was the only choice for the tyre manufacturer.

► MANY YEARS OF COOPERATION

Since 2000, CENIT AG Systemhaus has

been responsible for the DDC in Hanau. Within the group of companies – in 1999 Dunlop became part of the worldwide alliance between its former parent company Sumitomo Rubber Industries and the Goodyear Tire & Rubber Company – the DDC in Europe is responsible for product development of passenger and van tyres. The developers there work predominantly with the production site in Luxembourg. The Hanau centre relies on the design methodologies of CENIT, the CAD/CAM

with the necessary expertise. In the end, the services of CENIT convinced us.”

► V5 TREND: INCREASING

The model milling processes needed to be more efficient and handling simpler. Initial tests using CATIA V4 brought the developers very close to the limits of technology. CENIT was the first point of contact which explained the advantages and possibilities that CATIA V5 presented

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Head of Development Services at Dunlop

software CATIA and the simulation tool Vericut. From the beginning of the alliance, the companies here endeavoured to apply the best methods available in Germany at that time. However, the processes at Dunlop are sometimes more complex. This caused adaptation problems upon implementation. Therefore, the aim was to enhance the CAM systems, so that a smooth transition with mould manufacturing in Luxembourg was ensured. “At the time, we needed to find a reliable partner

for the special area of model milling. The 8.8 release convinced the specialists at Dunlop of the power of CATIA V5. “This software release version was ideal for meeting our requirements,” says Peter Glasner. In Hanau today there are two V5 and 34 CATIA V4 work stations in use. The trend for CATIA V5: definitely on the up. A clear commitment from Dassault Systèmes to CATIA V5 under LINUX would accelerate the migration even more.



PROCESSES SHORTENED BY MORE THAN 50%

► SIMULATION AND COSTS

However, CATIA V4 has not disappeared completely from the design department. It is still used in direct milling of tyre moulds, for example. However, Peter Glasner wants to move away from this soon: "However, adapting the processes from CATIA V4 to V5 is very time-consuming in this area." But the advantages of the new version are appealing: "V5 is now on a par with V4 in terms of direct milling – if not in fact superior, and the developers in the DDC can thus achieve better and neater results in design".

► PARAMETERISATION

Design work at Dunlop is largely repetitive. It mainly involves milling individual segments of a round model. Changes are made mostly to new profiles or to the diameter and width of the model. In order to relieve the designers of labour-intensive routine work, methodologies were developed together with CENIT for automating these repetitions. This means that a new NC tyre structure can now be developed quickly. This saves time and costs. The

remaining parts are adapted by the Dunlop developers according to the project requirement. "This is a phenomenal result for us, which we can implement with the help of CENIT," said Peter Glasner.

► TIME SAVING AND PERFORMANCE

With direct milling, performance can be further enhanced using more powerful hardware, a release change within V4 and small add-on programmes from CENIT. The people responsible can then achieve time saving of three to four hours per project.

Direct adjustment and control of data at the milling machine is not possible for Dunlop, because although mould design does take place in Hanau, manufacturing does not.

► DUNLOP AND CENIT

It is for this reason also that Peter Glasner considers cooperation with CENIT to be a considerable advantage: "Since then, we have been working well together. Even if our schedule was a bit tighter, we were able to meet most of our deadlines together. The short channels and rapid reaction time at CENIT certainly

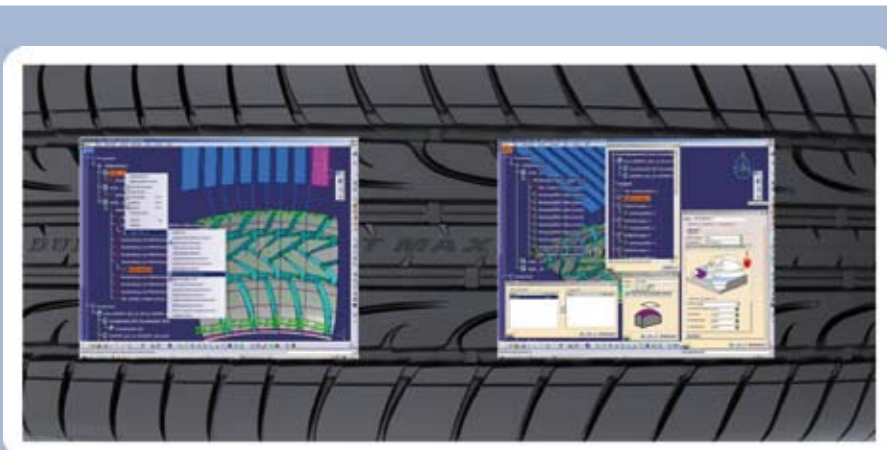
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► SUCCESSES IN MODEL MILLING

In the other manufacturing process also – model milling – Dunlop was able to achieve huge successes together with CENIT. The throughput times from development data input up to model manufacture previously ranged from seven to nine weeks. Last year, this time span was reduced to four weeks using the CENIT methodologies. This comprises complete 3D design, programming and simulation, as well as processing. Of particular interest was the work of the Hanau DDC, because of the fact that the actual mould manufacture takes place in Luxembourg.

played a large part in that." Head of Development Boris Nitsch also sees fundamental advantages in the cooperation with CENIT: "With such extreme release changes as with CAITA, you need partners who pay attention to advantageous new features and point out helpful features. It is practical if these consultants have already been involved in the development of these releases. CENIT fulfilled these requirements because of proximity to Dassault Systèmes. Here in Hanau, we have manufacturing carried out virtually, and we know that our data can be used in Luxembourg without any problems. This is the ideal way for us," says Boris Nitsch, describing the trend in the area of digital development.



CONTACT

CENIT
Industriestraße 52-54
70565 Stuttgart

Tel.: +49 711 7825-30
Fax: +49 711 7825-4000
E-Mail: info@cenit.de
Web: www.cenit.de/plm