SIEMENS

NX

Bimota

Arriving faster at the first prototype

Industry

Automotive

Business initiatives

New product development

Business challenges

Reduce time and cost of design process

Work within mechanical constraints while maintaining a high degree of design flexibility

Improve collaboration among the design team

Keys to success

Extreme attention to both mechanical and design detail

Immediate updating of all associated parameters after design changes

A careful and timely project phase combined with a high design standard

Results

Easier and faster design modifications

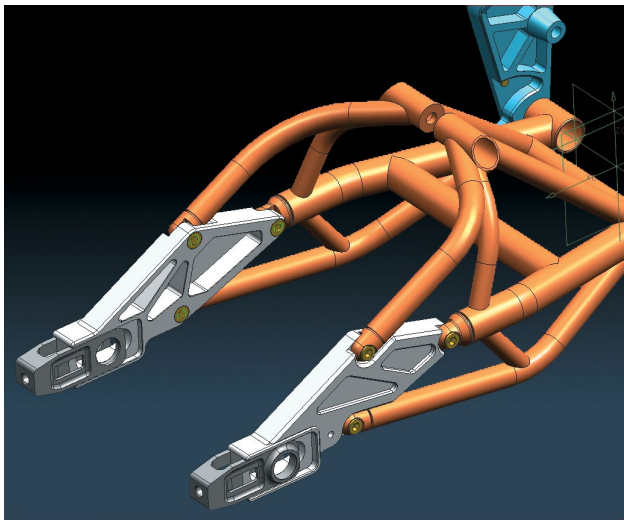
Reduced time and costs in the design phase

In motorcycle development, the ability to automatically update CAD models reduces design times and costs

Unique and award-winning products

Bimota, founded in 1973, specializes in the production of racing motorcycle frames. The company started out producing motorcycle equipment for various racing teams then progressed to the production of unique, custom motorcycles used for normal road driving. The eighties were the golden years for Bimota. The company reached its peak with an avant-garde model that was the first of its kind, the Tesi. In the nineties, after creating a motorcycle that was manufactured entirely in-house and not as successful as expected, the company went through a rough spell that lasted until 2003. Since then Bimota has challenged itself and has achieved excellent results, winning the "2004 Motorcycle Design Award," in the Supersport category. This award was presented for the new DB5 model by the Motorcycle Design Association at Intermot 2004.

Bimota is primarily an engineering company that uses its own technology to produce motorcycles equipped with other manufacturers' engines. "This doesn't mean that our engines are just series production models," explains Alberto Strada, technical manager. "In fact, we make



modifications to the intake, fuel supply and exhaust of the standard engines that we purchase. This is done to better adjust the engine performance to our needs."

More difficult to design than a car

Because new product development begins with an engine that has been developed by others, a highly flexible design tool is required so that changes can easily be made to the original engine configuration. As designers attempt to configure the frame, they are working within a series of objective constraints. The ease of making design changes is one reason Bimota selected NX™ software as its design automation solution. Other reasons include the fact that NX is a highly recognized system

Results *(continued)*

Production of mechanically sophisticated motorcycles that deliver the high styling standards customers have come to expect

Solutions/Services

NX
www.siemens.com/nx

Customer's primary business

Bimota designs and manufactures motorcycles.
www.bimota.it

Customer location

Rimini
Italy

"It is very important for us to have a fast and effective CAD system."

Alberto Strada
Technical Manager
Bimota

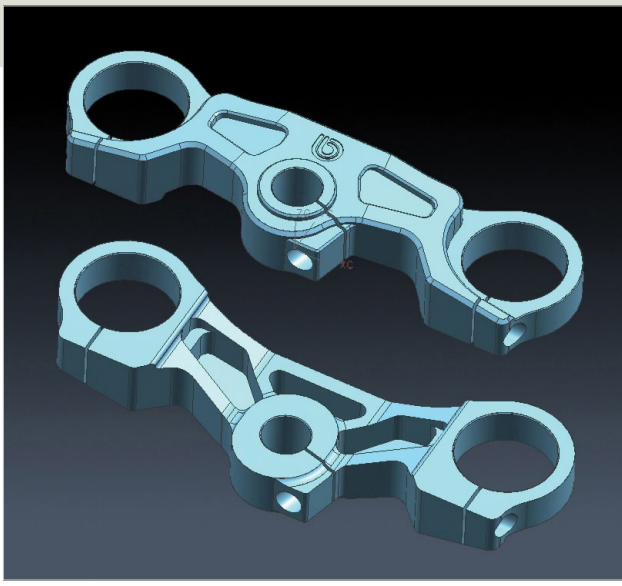
of choice for motorcycle producers worldwide, and also because of NX renowned quality.

"The difference between a motorcycle and a car project is much greater than one can imagine," explains Strada. "With a car, it is the styling that influences the mechanical parts, relatively speaking, whereas with a motorcycle there is the risk that every little change may have detrimental results. In addition, the space available on a motorcycle for making changes is very limited. That is why a modern, reliable and versatile design system is indispensable. It is very important for us to have a fast and effective CAD system."

Fast model updates speed development

"Our experience with NX has not only been essential for the motorcycle design phase for which it was originally intended, but also for the design of parts," says Strada. Designers are involved from the beginning of a project. This ensures the particular attention to detail that Bimota is known for, and also that its distinct and high standards of motorcycle styling are maintained. "Our design starts with the definition of an optimized layout where a project goal is defined, including all the main characteristics of the motorcycle," Strada says.

After importing the engine geometry and designing the frame, the next step is production of a first prototype to verify conformance to the design. This happens within a strict time frame. "It is a way to reduce times and costs," says Strada. "Having a prototype at your disposal is the way to verify all the small details. Without



a CAD system that allows the updating of all parameters, as is the case with NX, these small errors will create a huge amount of work. With NX you simply change the part in question to have all the updates made automatically."

Strada concludes, "This is why the functionality of NX suits us. We have been successful in producing a prototype in a very short time, while looking at every aspect of both the motorcycle design and production, using the same software package."

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