

motion world

The Magazine for CNC Automation

The background of the cover is a close-up photograph of a CNC machine tool. A silver-colored metal tool holder is mounted on a black base, and a purple cutting tool is visible. The machine is surrounded by various cables and components. The number "12" is visible on a metal surface in the bottom right corner.

The future of production

Sinumerik on the road to Industry 4.0

12

WorldSkills Leipzig 2013

Out-and-out winners

This year WorldSkills, the world championships of industrial and technical professions as well as trade and service professions took place in Germany for the first time in 40 years. The entrants in the metal-cutting professions relied on tried-and-tested technology: all the CNC machines were fitted with Sinumerik CNCs.

From July 2 to 7, 2013, more than 1,000 young people from 53 countries and regions came together in Leipzig's trade fair hall to determine the world champion in each of their disciplines. The professionals had previously demonstrated in national qualifiers that they were the best in their disciplines. More than 200,000 visitors from all over the world followed the exciting event live.

The right equipment for success

The booths of the metal-cutting professions in hall 2 were dominated by intense concentration and discipline. CNC turning and milling machine operators were alternately poring over drawings, programming in CAM, and standing at their machines. The demands on the entrants during these two competitions are enormous: they have to produce highly complex, imaginative parts on three days: once from aluminum and twice from steel, in two-sided and three-sided machining. They produce the parts based on a paper drawing that is programmed using the CAM system Mastercam and transferred to the machine. What counts here is selecting the right tools and finishing within the time specified.

In addition to the individual skills of the professionals, a good result depends on the best possible equipment. As the official partner of WorldSkills, DMG / Mori Seiki provided more than 30 turning and milling machines for

the fields of CNC turning and CNC milling, the demonstration skill Plastic Die Engineering, and the team competition Manufacturing Team Challenge. Jörg Harings, head of training at the DMG / Mori Seiki Academy and an observer of WorldSkills for many years, explains, "We selected the appropriate machine for each field with respect to accuracy and stability because the requirements vary considerably from one discipline to the next. Now that the competitions are over, it's possible for us to say that we were spot on with our choices. Of course, every machine also depends crucially on the right control system." DMG / Mori Seiki equipped all the machines with Sinumerik 840D sl and the Sinumerik Operate user interface. Harings states three main reasons for this: "It was important to us to have a control system that has an international standard. By that, I mean that it can be found in any country. It should also be universal, which means it should cover both milling and turning technology. The third reason was that it should be particularly operator-friendly – Sinumerik meets all three requirements."

Easy operation makes work much easier

The entrants in the competitions were impressed by the system's ease of operation. It is particularly important in the tense atmosphere surrounding the competition to have a system that

makes work much easier. It was no problem at all for Roland Wolbers from the Netherlands. He had never had anything to do with a Sinumerik CNC prior to his training for WorldSkills. His conclusion was that "Sinumerik is easy to understand. Once I'd got the hang of ShopTurn, everything just ran like clockwork." With more than 500 points and a medal for excellence, the Dutchman even took a place in the leading group. The Sinumerik Operate user interface also ensured a quick initial training period. Young people are already familiar with its Windows-style look and feel from working on PCs. In addition to this, all its work steps are very intuitive, so even the untrained quickly manage to get along with it. This was confirmed by Julian Arango, Colombia's entrant in CNC turning, who had never worked with the CNC or the machine before. Most of the competitors, however, had already familiarized themselves with the CNC in the run-up to the competition. In addition to taking part in a training camp run by the DMG / Mori Seiki Academy, they had the opportunity to practice with the Sinutrain training software.

WorldSkills São Paulo 2015 on the horizon

"After the match is before the match!" This also applies to WorldSkills because after the FIFA World Cup 2014 in Brazil, the next WorldSkills will take place there, too. More than 1,000 competi-

Sinumerik Operate

- Universal user interface for all technologies
- Easy Windows-style program handling
- Extensive diagnostic options
- Clearly arranged tool management
- Integration of customer-specific technology cycles
- Intelligent, self-checking cycles
- Easy set-up

Want to know more about the new functions of Sinumerik Operate? Simply take a look at our SINUMERIK InSight supplement.

tors and more than 1,000 experts from more than 60 countries are expected at the first WorldSkills competition in Latin America, which will be held in São Paulo from August 11 to 16, 2015. Tobias Brockfeld and Johannes Rudolf, the German entrants in CNC turning and CNC milling, can definitely recommend taking part in this competition to their colleagues. They say, "We thoroughly enjoyed WorldSkills despite the pressure, and they have helped us to grow both personally and professionally." Even without a place in the leading group, they still feel like out-and-out winners. ■

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Thousands of visitors from all over the world celebrated the winners at the WorldSkills closing ceremony



Maximum concentration: every movement counts when working on the machine and the CNC



The CNC Sinumerik 840D sl with the Sinumerik Operate user interface makes operation easier for the entrants