WORLD SKILLS
DEMONSTRATION SKILL
WATER TECHNOLOGY

New skill for water supply and waste water treatment for Municipalities and industries

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Founded in 1950, WorldSkills is a global organization that promotes vocational, technological, and service oriented education and training. We promote skilled careers in member countries and regions, all working with youth, educators, governments, and industries to help prepare the workforce and talent of today for the jobs of the future. WorldSkills gives youth the chance to compete, experience, and learn how to become the best in their skill of choice. From the traditional trades to multi-skilled technology careers in the industry and service sectors, supported by partners, industries, governments, volunteers, and educational institutions, WorldSkills is making a direct impact on raising the level of skills throughout the world. For more information: www.worldskills.org
Water is one of the most crucial resources we need in our life. Safe drinking water has always been one of the primary requirements for healthy and sustainable human life. However, World Health Organization (WHO) reported that 39% of the world’s population or over 2.6 billion people living without improved sanitation facilities, and 884 million people do not have access to safe drinking water (WHO, 2002)[1].

The competition of water technology at WorldSkills is to promote the awareness about the importance of water and to conserve the water. Water technology helps to maintain the optimum environmental standards while managing consistent and safe supply of water, and the treatment and recycling of the wastewater. The competition includes the maintenance of critical equipment and processes in water or wastewater treatment plants and the sewer networks.

WHY ARE SKILL COMPETITIONS SO IMPORTANT?

- Training, qualifying, and competing in the WorldSkills competition equals 4–5 years of professional training.
- Builds character, confidence, commitment, and self-esteem.
- Helps align and increase the quality of the required standards in vocational and educational training systems.
- Helps benchmark the educational training system against industry, public demand, and across borders.
- The challenge of a competition brings fun and exciting elements into teaching and training.
- Provides the validation that mastery of a skill requires practical learning and training over time.
- Raise quality, promote professional development, and drive improvements in vocational training.

WorldSkills offers the infrastructure and competition experience to engage with a number of target groups, from students in grade school and secondary school to youth, governments, and educators.

- More than 50 skills represented
- More than 75 countries and regions — representing over 70% of the world’s population
- More than 35 new member countries and regions since 2005

Since the 2003 WorldSkills competition, WorldSkills have had:

- A combined 1,251,000 visitors at the competitions
- A combined 6,117 competitors at the global level
The water technology profession has a broad range of tasks from technician, engineer to manager. Water Technicians may work on water supply, or wastewater treatment. Water Supply Technicians work in municipal and industrial water supply plants, while Wastewater Technicians work in the area of sewer networks as well as in wastewater and sludge treatment in municipal and industrial wastewater treatment plants. They carry out their work independently on the basis of technical documents and rules as well as on legal requirements. They acquire information, plan and coordinate their work. They document their works or services and take measures to ensure quality assurance, safety, health and environmental protection at work. They may work in large or small facilities, perform a wide range of technical duties in small plants or management roles in larger plants.

Whether working in water supply or wastewater treatment, the role of the Water Technician is to observe, identify, report, maintain, control and repair equipment and processes throughout the plant and the networks. For this purpose, they must have knowledge and expertise in mechanics, chemistry, biology, electrical skills automation and environmental protection.

Above all, health and safety matters most.

Irrespective of where they work, and their particular responsibilities, the Water Technician’s role is driven by the absolute requirement for quality in many respects, including:

- Continuity, consistency and safety of supplying water,
- Safe removal, treatment and recycling of wastewater, and
- Environmental protection.

The competitor, who is going to attend for Germany in Kazan in 2019, is going to be determined at the next IFAT Munich 2018. There, the WaterSkills Germany are going to take place. Teams of trainees and experts are going to compete against each other and prove their skills.

DWA significantly helped implement the competition “Water Technology” at the WorldSkills International. Along with Festo and new partners, the commitment is supposed to increase even more in the future.
Every two years WorldSkills hosts the world championships of skills, which attracts more than 1,300 competitors from all continents. At this event, young people have the chance to win a prestigious medal in their chosen skill. The competitors represent the best of their peers and are selected from skills competitions held in their own countries and regions. In 2019, for the first time, the event will take place in Russia. The ancient city of Kazan with 1000 years of history will host the participants of all around the world.

WorldSkills competition in Kazan will bring together participants from more than 70 countries who will compete in over 50 skills. The skills are divided into 6 categories, as follows:

- Construction and building technology;
- Manufacturing and engineering technology;
- Creative arts and fashion;
- Social and personal services;
- Information and communication technology;
- Transportation and logistics;

Water Technology its part of Manufacturing and Engineering Technology, and it will be held for the first time as an official skill. Therefore, the Skill Manager Team and the WorldSkills staff will be very glad with your participation in this exciting history. Let us make Water Technology popular and raise the curiosity of visitors to understand and even become a part of this industry. The world already knows how important water is for our survival; we just have to make them understand how professional, technological and of high quality the skill is.
### Day Overview

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<td>1</td>
<td>Routine work: Monitoring, inspection work over the plant (i.e.: wastewater treatment plant, water supply plant). Sampling of water and sludge, analysing in lab, report writing, preparing regular maintenance work.</td>
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<tr>
<td>2 and 3</td>
<td>Routine work: Monitoring, scheduled or emergency repair or maintenance of equipment (e.g. pumps, valves, pipes, sensors, measurement devices). Emergency call during the day 2 and 3 (the call will differ from team to team; depending on the availability of the needed equipment): Emergency repair will continue and the situation will be managed. The sand filter will be repaired and the flow and process will be repaired.</td>
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<td>4</td>
<td>This day is back to normal. The emergency is finished, the monitoring, sampling and lab work will be carried out to see the plant in a normal routine situation. All aggregates are well functioning and the faults are successfully repaired. The documentation work will be more because a monthly report about regular and emergency work has to be finalized and given to the supervisor. The month is over and the major wants to know what happened and wants to know the costs and the measures to avoid problems. This story board will help to explain the occupation to the visitors. It shows routine work indoors (process and lab) and shows the outdoor tasks on the various “rolling tables”. The occupation has variations. Inside work and outside work. Routine and emergency duties. Electrical, metal and chemical skills are need as well as communication and IT skills [see the standards].</td>
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In October 2017, the German team, which consisted of 42 men and women, attended the 44th WorldSkills of professions in Abu Dhabi. In 37 competitions and the demonstration skill “Water Technology”, the attendees proved their skills, partly in teams, partly individual, against their most talented colleagues worldwide. A total of 1,300 young talents from 59 different countries and regions proved their knowledge and abilities in 51 disciplines. At October 18th 2017, at 5.30 pm local time, Dr. Nader Imani (Festo Didactic), and Rüdiger Heidebrecht (Head of Department Training and international Cooperation) announced the winners of the demonstration skill “Water Technology”. Four busy days lay behind the five candidates, who all did a great job.

Mohammad Hossein from Iran achieved the first rank, followed by Patrick Gundert from Germany and Dmitrii Ponomarev from Russia. All participants were coached by their local experts prior to the competition. Hilmar Tetsch from Stadtentwässerung Stuttgart has been the “Chief Expert” of the competition and did a great job. Since many years, he is involved in the DWA-special committee BLZ-13 “Professional Competitions”. He is very experienced and has a great international network. “We have extremely engaged experts for our national competitions for our skilled workers and Universities at IFAT and now also for the high-level competition at the WorldSkills”, says Rüdiger Heidebrecht, and is proud that Germany managed to support the implementation of the new challenge so dispositive. “Without the voluntary helpers and the active support of the DWA-member Festo, this would not have been possible”, he adds. The collaboration between DWA and Festo has its origins with the WorldSkills Leipzig in 2013. Back then, German trainees from various cities introduced the profession “Water Supply Engineering Technician” and “Sewage Engineering Technician” to the WorldSkills community. On an international level, these professions merged into the competition “Water Technology”. Festo also participated in the WorldSkills 2015 in Brazil.
Every participant, expert and visitor collected unforgettable impressions and experience to take back home. The keywords “international understanding”, “defining educational standards”, “making new friends”, “location determination” and “networking” only insufficiently describe the event and spirit on-site.
You got interested?
– For more information you can contact:

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