

夜晚的西班牙El Atazar大坝
The El Atazar Dam in Spain by night

瑞士的Grande Dixence大坝：世界上海拔最高的重力坝
The Grande Dixence Dam in Switzerland:
the world's tallest gravity dam

案例精选 REFERENCE PROJECT

大坝和挡土墙的安全监测 SAFE MONITORING OF DAMS AND RETAINING WALLS

测量技术专家Huggenberger AG已经在全球超过450个重大工程结构中装配了自己的仪器设备。该公司依靠德特威勒的信号电缆来连接传感器和测量仪器。

Huggenberger AG, a measurement technology specialist, has equipped over 450 major engineering structures worldwide with its instruments. The company relies on Datwyler signal cables to connect sensors and measuring instrumentation.

Huggenberger AG成立于1900年，是一家位于苏黎世湖豪尔根的瑞士公司，主要从事高精度物理测量系统，特别是针对坝墙测量产品的专业开发和生产。他们的产品系列包括基于尖端技术的机械和电子传感器以及计量设备，适用于监测和检查结构的安全性。

Huggenberger AG, established in 1900, is a Swiss company in Horgen at Lake Zurich which has specialised in the development and production of high-precision physical measurement systems, particularly for dam walls. Their product range includes mechanical and electronic sensors and metering devices which are based on cutting-edge technologies and are used for monitoring and inspecting the safety of structures.

大型建筑和土木工程产品以及许多生产设施的应变和结构完整性需要进行长期检测。所以，监测此类建筑设施的倾斜和水平位移是至关重要的。Huggenberger AG为此提供了创新的全自动摆锤测量解决方案（含监测系统）。公司还为客户提供了测量和显示许多其他指标的仪器，包括扩张、压力、温度、水压、张力和阻力等。服务范围从咨询到开发和生产，再到装配、启动和培训，全部包含在统一的仪器系统解决方案中。

The behaviour and structural integrity of major building and civil engineering works as well as of many production facilities need to be observed. It is therefore vitally important to monitor their inclination and horizontal dis-

placement. To this end Huggenberger AG supplies innovative fully automatic pendulum measuring solutions including monitoring systems. The company also supplies customers with instruments for measuring and indicating many other values. Examples include expansion, pressure, temperature, water level, tension and resistance. The range of services extends from consultancy through development and production to assembly, start-up and training in an instrumentation system.

德特威勒特种电缆

Huggenberger AG已经在世界各地超过450个大型建筑结构中安装了其特有的测量技术装置，其中包括坝墙、土坝、电站、施工渠、隧道和桥梁。约30年来，Huggenberger AG一直在利用“TS-PUR”和“TAP47”信号电缆为仪器和系统提供可靠的连接。这些特种电缆均由德特威勒制造，并成功用于伊拉克最大的水坝摩苏尔大坝、斯里兰卡中部的兰登尼加拉大坝、幼发拉底河（土耳其）上的阿塔图尔克大坝、马里境内的马南塔利大坝、多哥的内戈贝托大坝以及瑞士最长的拦河坝上库大坝等众多建筑结构。

Special Datwyler cables

Huggenberger AG has already installed its measurement technology in over 450 major structures throughout the world, including dam walls, earth dams, power stations, construction trenches, tunnels and bridges. For around 30 years Huggenberger AG has been using “TS-PUR” and “TAP47” signal cables to

provide reliable connections for its instruments and systems. These are special cables, both manufactured by Datwyler, and used in structures which include the Mosul Dam, the Randenigala Dam in central Sri Lanka, the Atatürk Dam on the Euphrates (Turkey), the Manantali Dam in Mali, the Nangbeto Dam in Togo, and the Muttssee Dam, the longest barrage wall in Switzerland.

“TS-PUR”信号电缆拥有4根绞合导体、铜线编织屏蔽层和PUR护套，使其灵活柔韧，适用于建筑场所。可以直接铺设到新浇混凝土或电缆导管和管道中。

“TS-PUR” signal cable has four stranded conductors, copper braided shielding and a PUR sheath, making it both flexible and suitable for construction sites. It is laid directly into fresh concrete or in cable ducts and cable conduits.



在伊朗Jegin大坝上铺设用于混凝土应变测量的电缆
The laying of cables for
concrete strain measurement
in the Jegin dam, Iran.