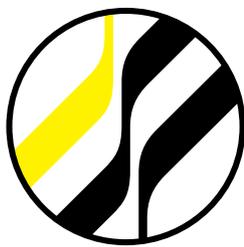


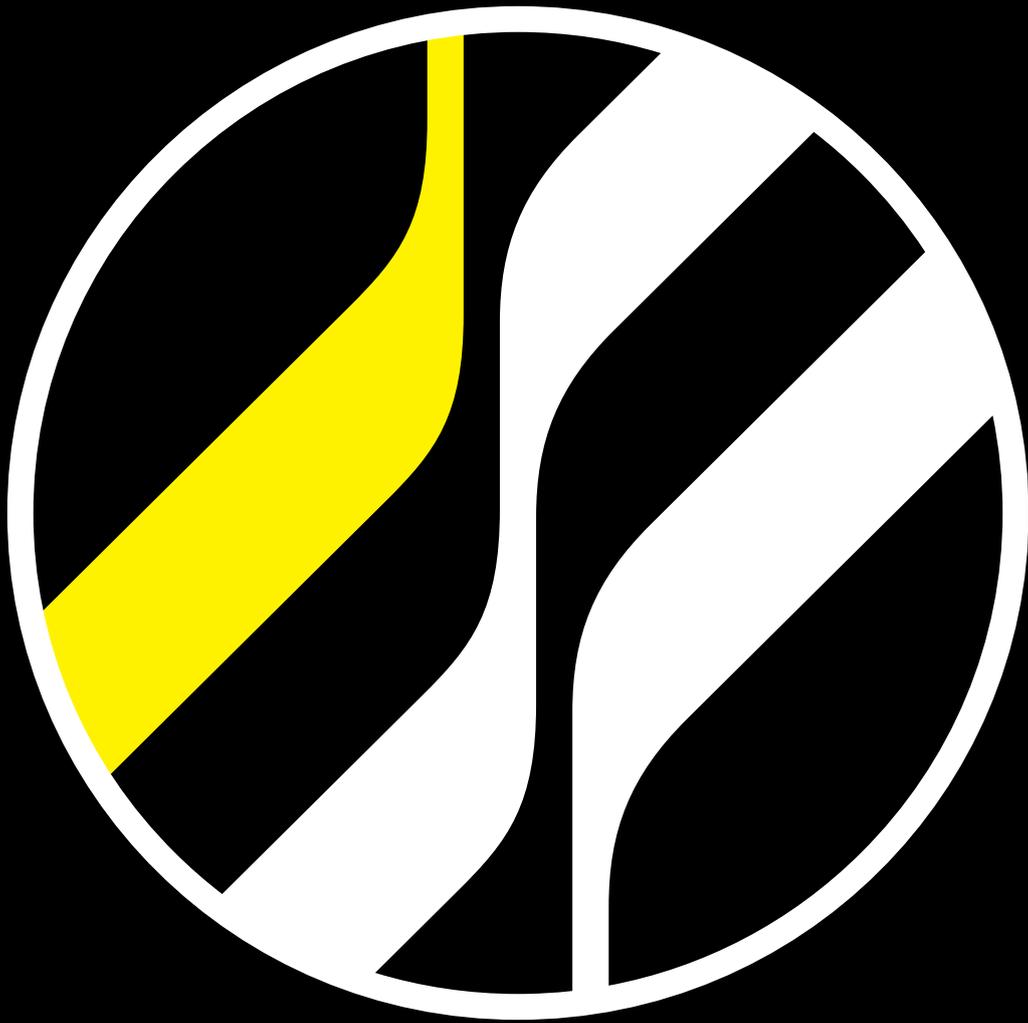
Kelvion



After-Sales & Service

PLATE HEAT EXCHANGERS



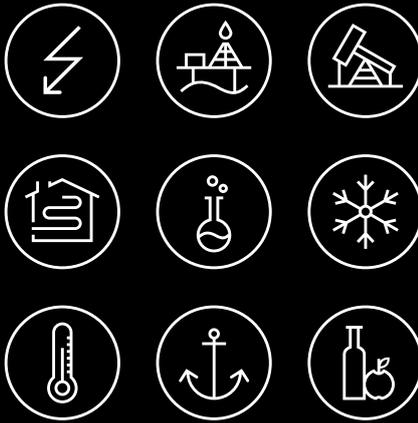




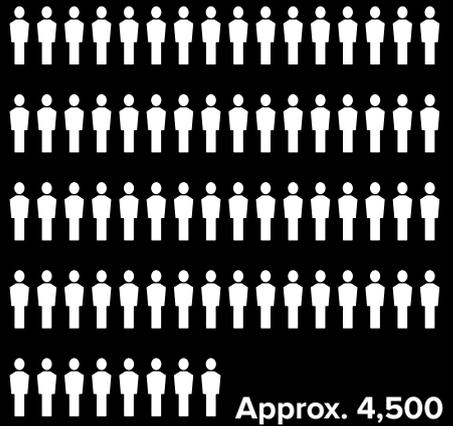
Kelvion – a tribute to Lord Kelvin

Lord Kelvin (1824 – 1907) formulated the laws of thermodynamics

Our markets:



Our employees:



YOU'VE ARRIVED – AT THE GLOBAL EXPERT IN HEAT EXCHANGE

Welcome to Kelvion. As successor to the GEA Heat Exchangers Group, we continue to break new ground, making discerning customers more successful than ever with our integrated heat exchanger solutions.

Our solutions for your applications:

We offer our customers one of the world's largest product portfolios in the field of heat exchangers. It includes individual solutions for practically all conceivable applications and complex environmental conditions: plate heat exchangers, shell and tube heat exchangers, finned tube heat exchangers, modular cooling tower systems, and refrigeration heat exchangers.

Your markets are our markets, too:

The markets in which you and we together operate are among the most important in the world: energy, the oil and gas industry, the chemical industry, marine applications, food and beverages, climate and environment. We provide every single market segment with solutions of outstanding efficiency, safety, and sustainability.

We are highly committed to earning your trust:

We want to win your trust with everything we do and convince you with the solutions we offer. With this high aim in mind, we invest our extensive know-how, our great precision, and our passion in everything we do: including product development, manufacturing, installation, and after-sales support.

Seeing things from the customer perspective:

Your specific requirements count – and nothing else. Whatever we offer you, it must meet these requirements. Our entire way of thinking and working is geared towards this aim. Our customers truly appreciate this: after all, this is how we make their companies more efficient.

We are at your service.

Kelvion – Experts in Heat Exchange.



Where demand and reality meets

Our dedicated specialists are the figurehead of our After-Sales & Service. They are at your disposal all over the world whenever you need reliable and competent support. Their commitment guarantees you one thing above all – **convincing and reliable experience.**

GLOBAL SERVICE AND SUPPORT FROM AN EXPERIENCED PROVIDER

We are service specialists for plate heat exchangers of all types and brands. Our portfolio comprises all after-sales and other services from installation up to innovative tightness testing. Our global network of locations enables 24/7 service thus maximising the performance of your systems everywhere, at any time.

As a leading manufacturer of plate heat exchangers, we work for our customers every day all around the globe and in this process, the service work carried out enhances our knowledge and experience every day, thus producing valuable improvements.

These have a positive effect amongst others, on precise installation of apparatus, on visual inspection within the scope of proactive maintenance, and on mechanical and chemical conditioning of plates in one of our workshops belonging to our service network.

One of the reasons that makes us the leading service specialist – the services aim at tangible values:

Quality and safety

Maximum service quality is the result of individual customer advisory service and precise work.

Innovation

Innovation creates solutions for the different requirements specified by our customers.

Efficiency

Optimised operational sequences and maximum availability of systems ensure better economic profitability

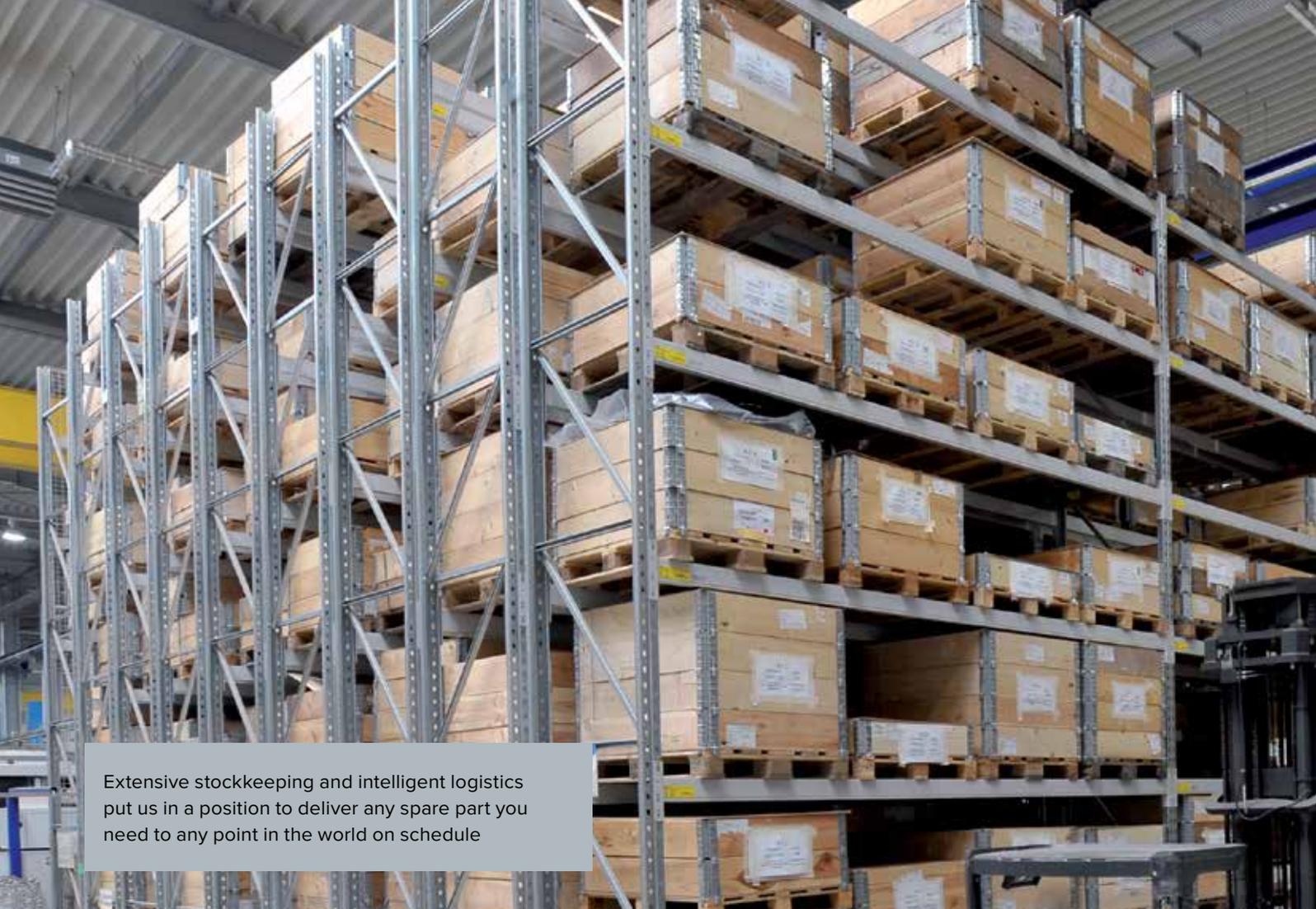
Expert knowledge

Our in-depth knowledge and experience result in focussed competence, thus offering significant benefits to our customers.

Trustworthiness

Reliability, sense of responsibility and transparency in customer communication distinguish the work of our service staff.





Extensive stockkeeping and intelligent logistics put us in a position to deliver any spare part you need to any point in the world on schedule

FLEXIBILITY MEETS PROFITABILITY



What are we offering our customers as plate heat exchanger specialist? In general, you benefit from the comprehensive scope of services provided by a reputable expert for gasketed, fully welded and brazed plate heat exchangers – and from a worldwide network of service locations. In particular, you also enjoy the benefits of no-compromise customer orientation assuring you of individual and optimised service. Our service meets your demands in a well aimed way and provides suitable solutions within a short time.

Our highly qualified technicians lay the foundations for smooth operations with initial installation and commissioning. Inspections, maintenance,

reconditioning and improvements are available for all types of brands. In addition we carry out all regular work such as cleaning of all plates and fitting of all gaskets. Your benefit: We have wide-ranging know-how based on findings from decades of development work in the field of plate heat exchangers.

One result of our development work: To track down any material fatigue we have available a leakage testing method to be used as a preventive tightness test. In this process, a special inert gas, able to detect even the most minuscule compromise, is introduced into the closed plate heat exchanger.



ALWAYS THERE: FIRST-CLASS REPLACEMENTS

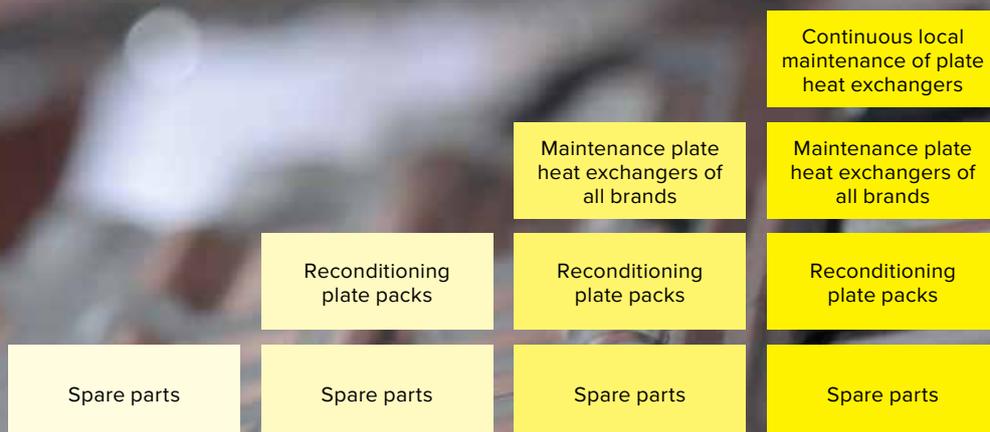
Maximum system and apparatus availability is the key to increased profitability. Depending on the degree of loading, you can sometimes expect wear even on high-performance plate heat exchangers sometime. The cost of failure or downtime of a system can be three or four times the maintenance cost of the system. This is why spare parts availability plays a particularly important role in our services.

For you, this means: We deliver the spare parts needed to you at any place as quickly as possible at any time. This avoids costly delays and gives you more flexibility in your processes.

Trust in our consistent product quality: Replacement by us means high-quality and absolutely perfect fit plates and gaskets suitable for all series and brands.

In addition, our stores permanently stock gaskets suitable for almost all brands and models or can at least procure them at short notice. Our service specialists who are perfectly familiar with the respective process requirements know which solution is the optimum in your case.

Select your own Complete Care Package.



STEP BY STEP WITH THE **BEST** SERVICE QUALITY

Excellent quality from one single source.

Our After-Sales & Service offer is based on a stepped care system maintenance package individually tailored for every customer. These tiered maintenance contracts also specify aspects such as cost control and planning safety with the desired service modules. Another plus: The clearly defined

content ensures reliable cost transparency. Your benefit – the services can be combined at will to form an individual service agreement: Tailor-made to suit your needs, you have the flexibility to choose your personal service package containing the modules that take your special requirements into account – and support your company's success.



TWO PRIORITIES CHARACTERIZE OUR RANGE OF SERVICES

- 1** Detailed consultation by our technicians and experts regarding all questions on the subject matter of plate heat exchangers.
- 2** Preventative inspection and maintenance used for optimising the ability of your systems.

In addition, the service contracts also include numerous options within a defined cost frame. From delivering

spare parts to personnel training and assistance in case of emergency up to permanent local service, a wide range of options are available to you.

Our extensive research & development, world class production facilities and design expertise gives our customers confidence and peace of mind.



Maintenance

RECONDITIONING A PERFECT RESULT IN 10 STEPS

Proper installation is fundamental to the service life of a new gasket. For this reason, we leave nothing to chance in maintenance and ensure you get a first-class result from our tried-and-tested 10-step process.

- 1** Upon receipt of your plates, we will perform an initial inspection of the plate and gasket integrity. This step is performed to eliminate any unnecessary and costly process steps
- 2** Thorough removal of the old gasket to ensure a good clean surface area prior to installing a new gasket
- 3** Chemical cleaning of the plates removes stubborn deposits. Depending on the type of deposits, either acid or caustic bath will be utilized
- 4** Dye test and second inspection is performed to determine if there are any cracks or pin holes in the plate



5 Removal of residues after dye penetration test

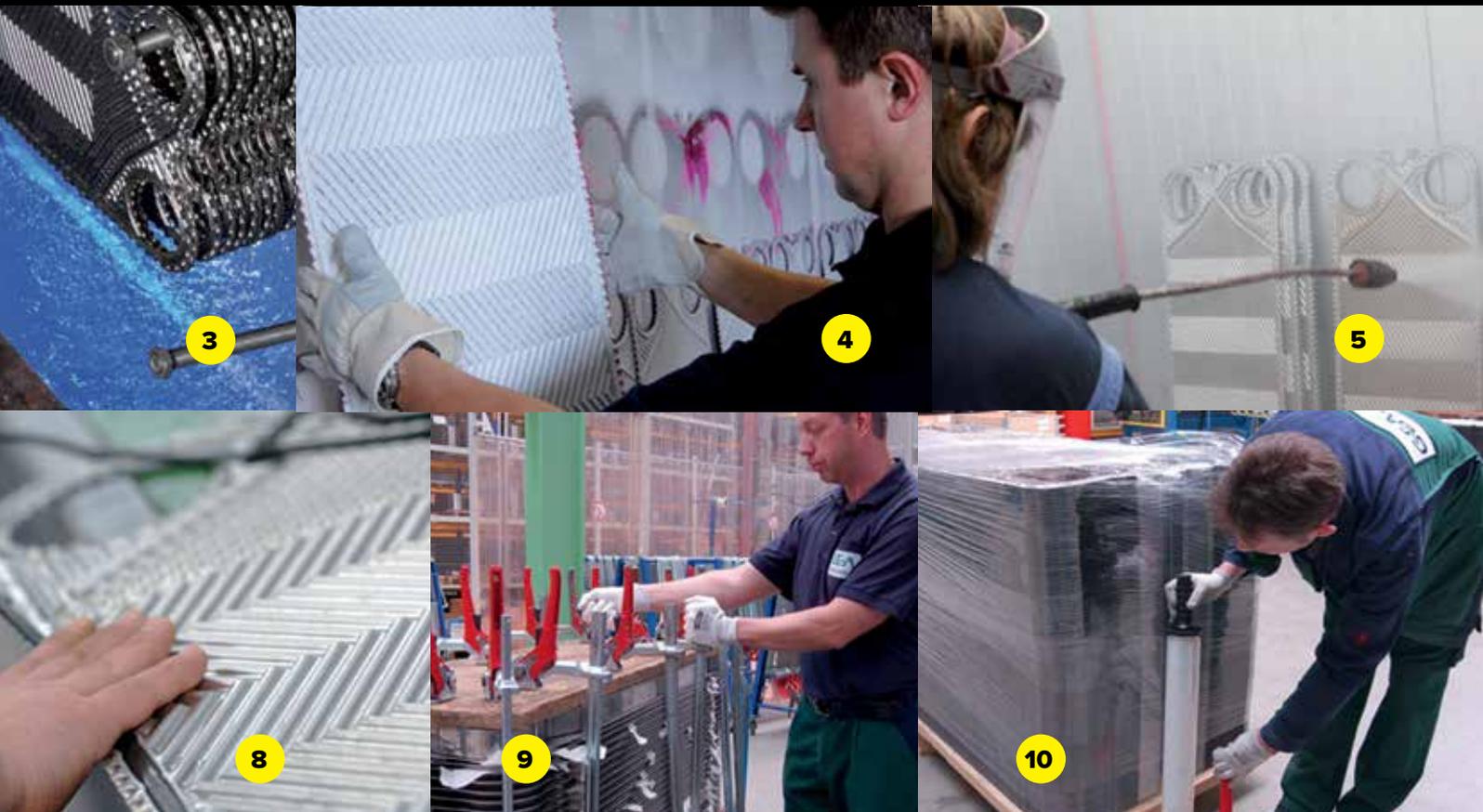
6 The gasket groove is cleaned and prepared for the regasketing process

7 Final inspection of each plate

8 New gaskets, EcoLoc or glued, are fitted

9 For glued gaskets – tensioning of plate pack and glue curing in an oven

10 Final stamp of approval and careful packaging of plate pack for safe transportation





The test gas used guarantees the highest possible leakage detection rate using technical/physical means. Quality standards such as IFS and HACCP in foodstuff production are met reliably.

Tightness testing

THE INNOVATION

FOR PERMANENT

AVAILABILITY

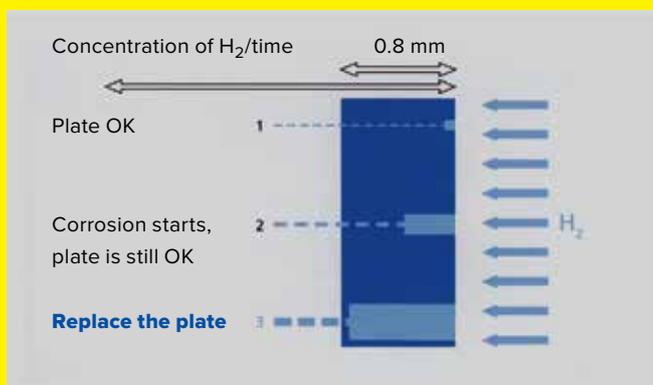
Pressure hammers, temperature change, corrosion: Plate heat exchangers are exposed to external influences that may produce microscopic leaks. This preventative tightness test can reliably detect material fatigue in its starting phase without having to open the plate heat exchanger.

In the past, preventative and reliable tightness testing was not possible on a closed heat exchanger. Consequently, leaks could be detected only after a plate has been compromised due to pinholes or material fatigue. We use a tightness testing method to discover leaks and the beginning of material fatigue at an early stage without having to unscrew all the plate heat exchanger bolts.

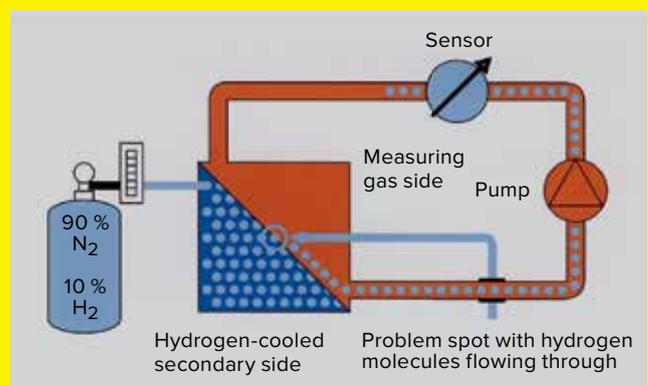
The new testing method involves feeding a hydrogen/nitrogen mixture into the closed plate heat exchanger on the water side which then flows through the plate channels. If one of the plates has only the finest hair crack, a very small quantity of this inert gas will flow to the second and empty side and can be detected there with absolute reliability by a sensor. The time needed for this test per heat exchanger is reduced to around one hour and therefore is only 1/20 of a dye penetration test that delivers results of comparable reliability.

Use of this innovative method, thus prevents unplanned stoppages or downtime. Our proactive leakage test improves process safety, reduces downtime and cuts your operating costs.

Early detection of material fatigue



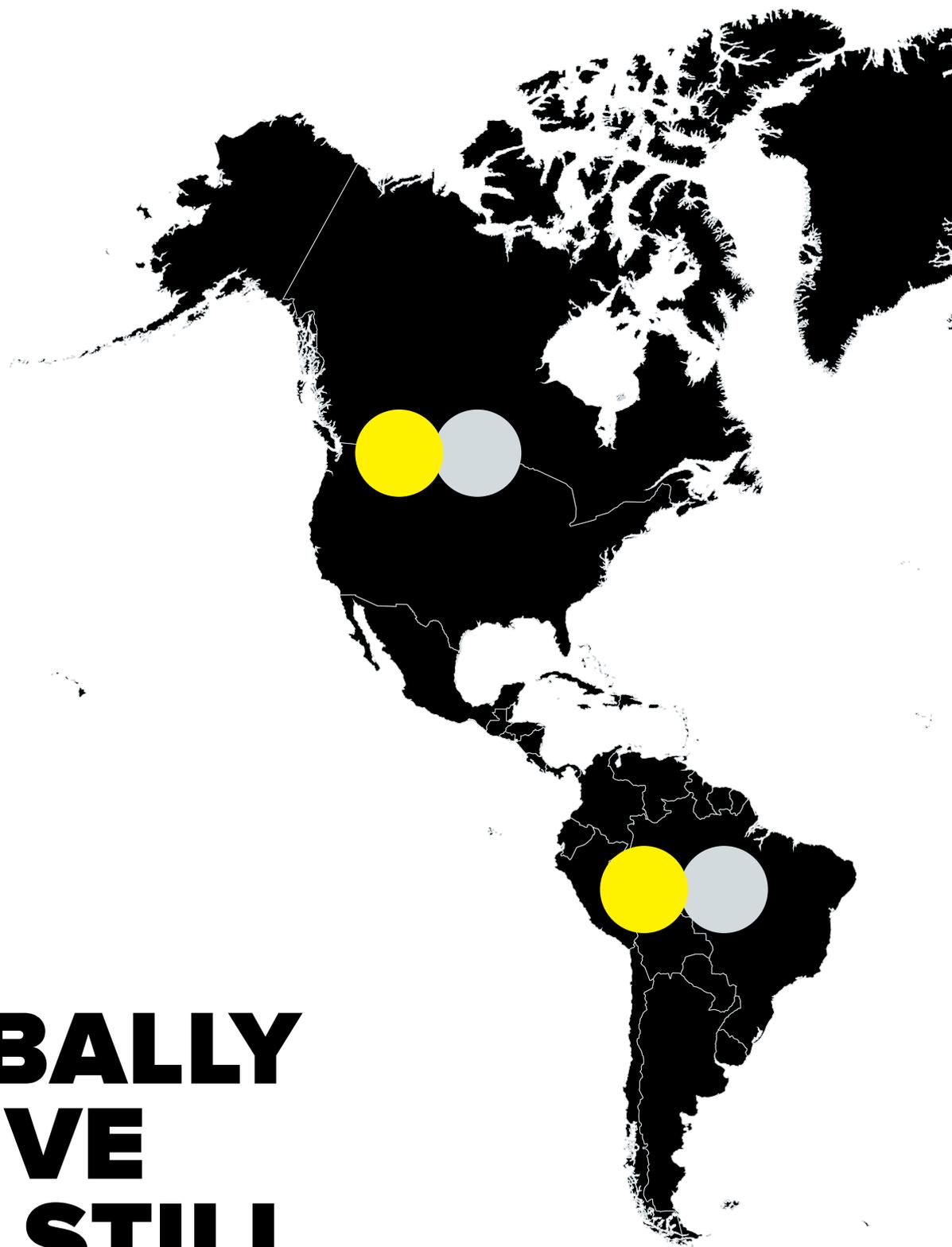
Schematic representation of H₂ method



The hydrogen method:

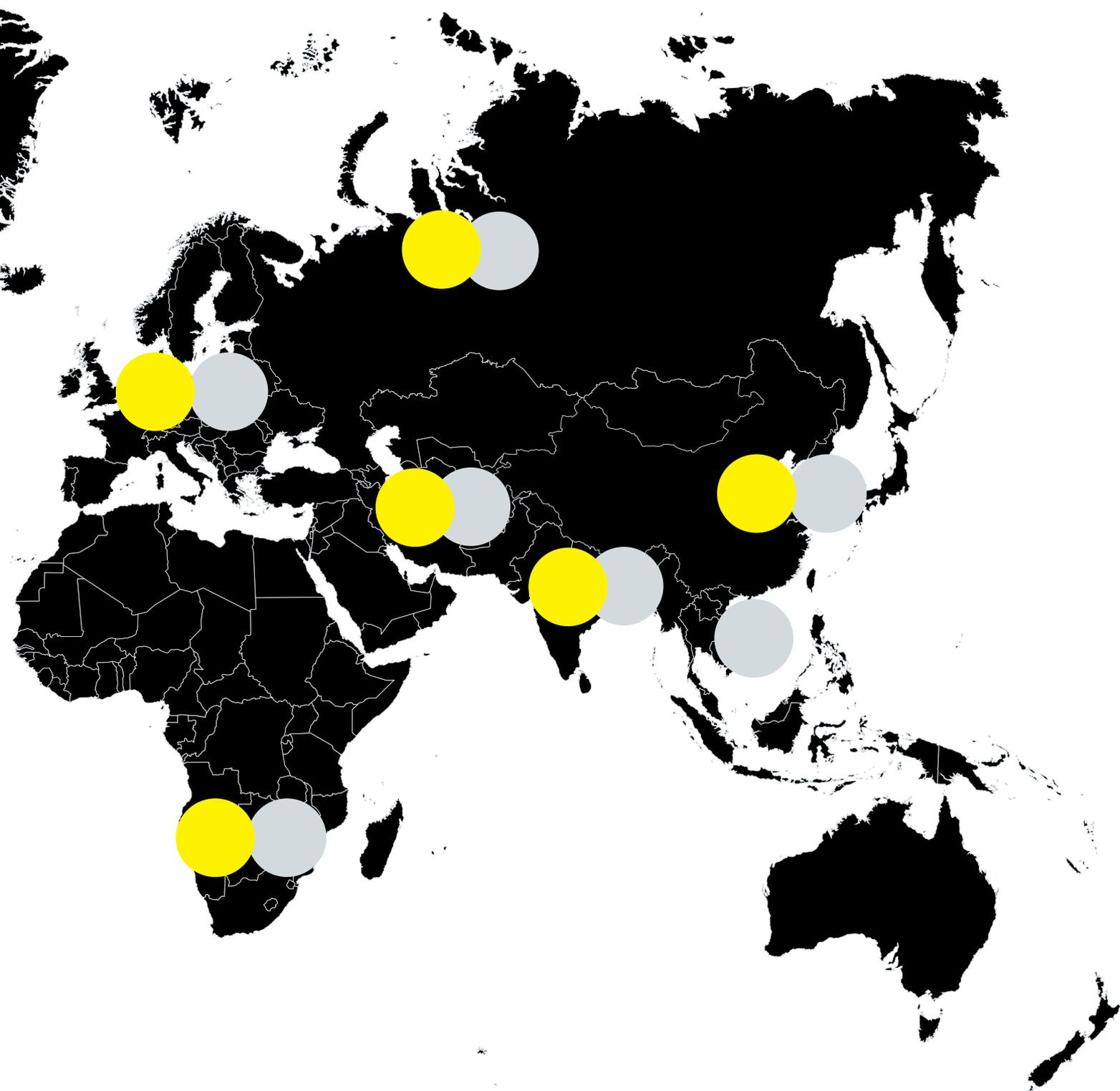
The hydrogen method is based on a testing gas (inert gas, consisting of 10 % H₂ and 90 % N₂) that is suitable for both leak detection and tightness testing. Hydrogen at the correct concentration is absolutely

safe (ISO 101569). In fact, hydrogen/nitrogen mixtures are also used as a shielding gas atmosphere.



GLOBALLY ACTIVE AND STILL CLOSE BY

No matter where your market is, regardless of country, we are never far away. We are always happy to answer any questions you may have and meet your requirements. Even the largest, most successful project begins with an initial, profitable conversation. We look forward to hearing from you.



-  **Global production footprint**
-  **Global sales and service**



Just scan this QR code with your smartphone or visit our website at: www.kelvion.com – there you will find a highly competent contact in your immediate vicinity.

www.kelvion.com