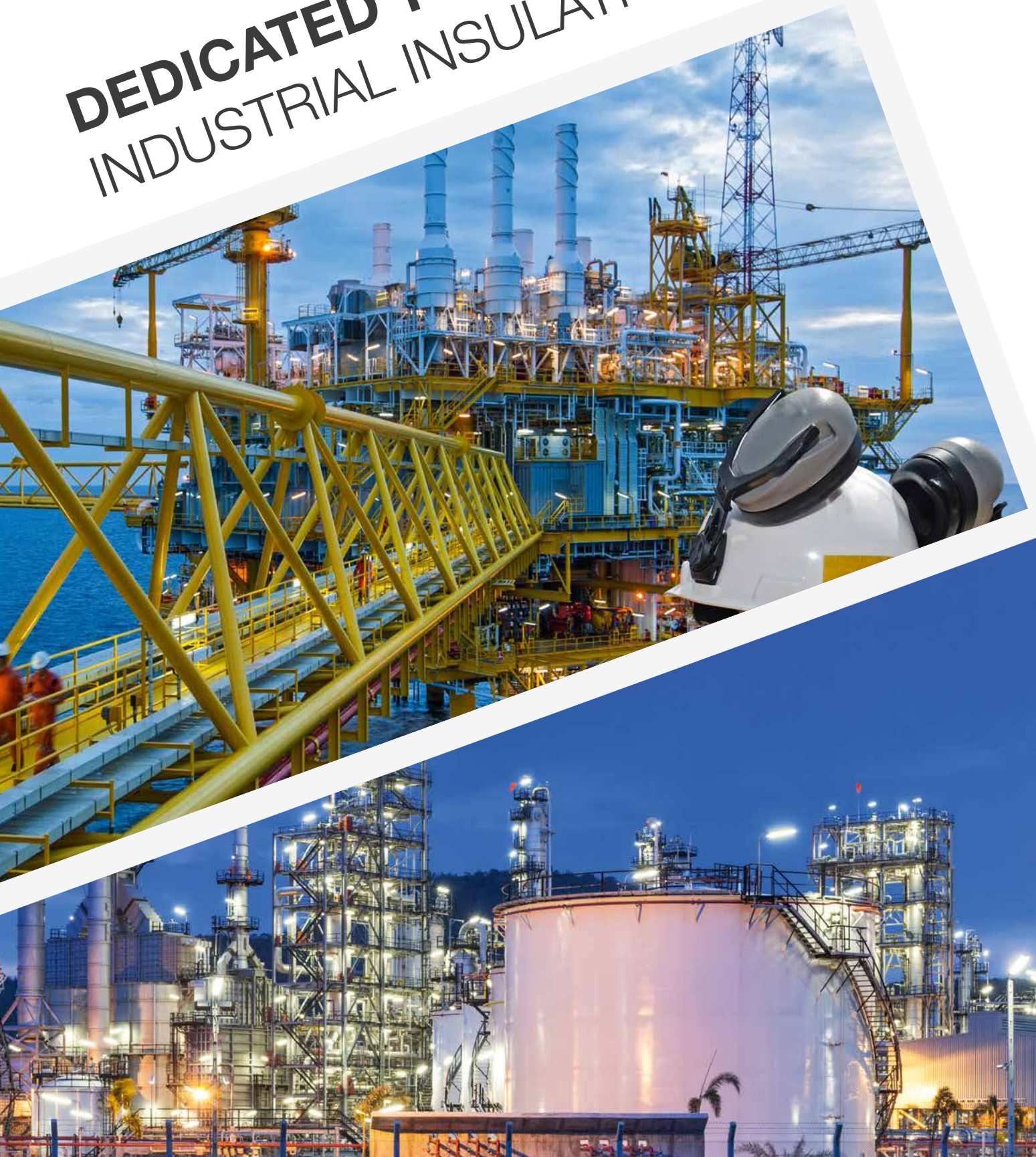


# DEDICATED TO INDUSTRIAL INSULATION







# ISOLATIE COMBINATIE

For over 40 years, Isolatie Combinatie (IC) has been manufacturing, delivering and installing insulation solutions for industrial applications, both on- and offshore. Our goal is to increase the reliability and safety in the industry and, where possible, to ensure energy savings. With its own design and production department IC can quickly respond to the needs and together with the client we will provide a 100% matching solution.

## High-quality insulation

Deliver what we promise. Delivering high-quality insulation systems, that is what we stand for at IC. We invest in our quality through our quality management system ISO 9001 and believe that, next to a well-coordinated planning, product quality and performance are key to the success of your project.



### Expertise

More than 40 years of experience and close cooperation with clients.



### Tailored

Industrial insulation solutions that fully fit your application.

## “All insulation products are made in our own ISO9001 certified production facility”

The production facility for prefabrication of sheet metal insulation systems and cladding parts covers an area over 1200 m<sup>2</sup> and is strategically situated right next to a major highway near Amsterdam. Additional design support and performance calculations for the systems can also be provided from this location.

In addition, IC has a facility for the production of insulation mattresses and light weight insulation systems which are also made to customer specifications by qualified staff.



### Certified

According to the most recent standards for maximum safety.





# CUSTOM MADE SOLUTIONS

## Our approach

In the most ideal situation, IC would be involved during the engineering phase of a project, when making the design of industrial insulation systems. In this way, our clients benefit the most of our knowledge and practical hands on approach. Sometimes little changes in the design can lead to large reductions in costs and lead times. Often we hear that this approach has brought the projects to a higher level; a level from which the customer benefits both in savings and long lasting efficiency improvements.

## Energy saving calculations

By using well-engineered thermal insulation big savings can be achieved. Not only savings in production costs, but also in an indirect way reducing CO<sub>2</sub>, NO<sub>x</sub> and SO<sub>2</sub> emissions and minimizing the carbon footprint of end products. The savings can be proven in calculations which IC can help you with, for example calculations like; max surface temperature, heat loss and heat up/ cool down times. IC can also help clients visualise their return on investment and calculate the corresponding repayment period of a selected insulation system.

## Installation on site

Many industries are working with tight schedules or fixed maintenance cycles. The installation of fire, acoustic or thermal insulation not only requires good preparation from the production side but also often requires a structured approach and precise logistical planning. Through a high degree of flexibility, IC is able to match customers needs in manpower and material with the existing schedules at the location.

**“With well-engineered thermal insulation big savings can be achieved”**







# THESE ARE OUR THERMAL SOLUTIONS



## Thermal insulation

The provision of thermal insulation at industrial facilities is often initiated by a desire to increase safety and process reliability, and at the same time to reduce energy consumption and CO<sub>2</sub> emissions.

IC provides customized solutions for the efficient isolation of heat generating applications but also cold processes. The solutions consist of complete sheet metal systems or tailor made insulating jackets and mattresses. All thermal insulation systems can be extended with heat-tracing, if desired.

Thermal insulation is for example applied on hot surfaces like exhaust systems to protect personnel against burning. It can be applied on process lines to prevent in-process crystallisation or it can be installed as an anti-freezing system for example; drinking-water or fire water lines.



## Cold & cryogenic insulation

Cold insulation requires a high level of craftsmanship; any small non-system application or vapour barrier penetration can cause significant icing. Faults cannot just put the process at risk and influence the quality of products but may also lead to considerable energy and evaporation losses or unwanted pipe corrosion.

### High-performance insulation systems

The liquefaction, storage and transportation of cryogenic media such as CO<sub>2</sub>, LNG (-160°C) or LPG requires high-performance insulation systems. IC designs and installs systems which can withstand high thermal stresses and vibrations. The systems are also equipped with the required safety provisions. IC can even provide solutions for lower temperature media like liquid oxygen (-183°C) and liquid nitrogen (-196°C).



## Tank insulation

When storing liquids in tanks, it is often important that the contents of the tanks be maintained at a constant temperature. In addition to a temperature retention, in many situations it is also necessary to take into account the reduction of energy losses, moisture influences, possible gas exchanges and effects of light.

IC designs and provides a professional installation of insulation systems on trailers, fixed and mobile tanks including large volume tanks on storage terminals.



### Fire resistant insulation

Fire proofing and insulation systems for industrial applications requires expertise and experience. With the knowledge, acquired over more than 40 years, IC realizes bespoke fire protection solutions. The passive fire protection solutions consist of fireproof casings, fire resistant walls, floors and ceilings, transit and penetration, sealings and the construction of complete fireproof compartments. When constructing fire-resistant systems, IC uses proven materials and certified systems. Next to this IC is a Flamepro selected contractor using Flamepro certified systems & products.



### Jet Fire protection systems

The IGNIS PFP panels, boxes, walls and jackets provide a highly effective protection against jet fires. These fires are one of the most severe fires which can occur at an industrial location where flammable gas is used under high pressure. Jet fires are characterised by an immediate high temperature of up to 1,200°C, an extreme heat flux and a high erosion risk due to the constant impingement of the flame. The panels, walls and boxes are made of 100% stainless steel 316L, as well as the accessories of the jackets; like clips and quick fasteners.

For the panels IC also has a complete line of all stainless steel penetrations, hatches and air vents available. These items have been tested at HSL in Buxton under extreme Jet Fire conditions.

The jackets and panels have been tested and are certified according to the Jet fire standard 22899-1, 2007. Certificates and test reports are available on request. All IGNIS PFP components including the jackets can be used separately or can be combined into a hybrid system.



# FIRE INSULATION WALL, BOX, PANEL OR JACKET







# ACOUSTIC INSULATION ALSO OVERHAUL AND REPAIR



## Acoustic insulation

Acoustic insulation systems for industrial applications in general have two objectives; to protect staff working in the vicinity of the installations and to reduce noise emissions to the environment, especially in densely populated areas. IC has years of experience in solving sound reduction issues and the application of acoustical industrial insulation. The design of the systems is determined by demands of the client, external factors and noise levels that need to be achieved due to health regulations for example. Where required acoustic insulation can be combined with thermal insulation materials to not only reduce the sound emission but also prevent energy loss.



## Overhaul and repair of metal constructions or insulation system

Construction components and technical installations of offshore and onshore locations often suffer from corrosion. IC takes care of the overhaul and repair of existing technical and construction components with work taking place on-site (including offshore) or in the IC workshop. The blasting and re-coating of a corroded component is sometimes not sufficient. Instead of a complete replacement, a makeover with newly “copied” components can be a good alternative. Repairs and / or revisions, with the possible replacement of insulation systems, are often faster to realize and will result in cost savings.





### Safety first

Safety is, was and always will be top priority in the IC organisation. Not only through policy statements, handbooks and systems such as our certified VCA \*\* SHE system, but also due to the continuous safety awareness of all our employees and approved subcontractors with respect to every aspect of their daily work. As a professional organisation IC has already been using an annual Safety, Health and Environment Plans & Reports since 1993, to provide in a continuous improvement of the safety systems and procedures. All our employees are in the possession of relevant safety certificates such as sky climber, VCA Vol and more.



### Logistics solutions

Many industries are working with tight schedules or fixed maintenance cycles. The installation of fire, acoustic or thermal insulation not only requires good preparation from the production side but also often requires a structured approach and precise logistical planning. Through a high degree of flexibility, we are able to provide enough manpower and material to work to existing schedules at the location.



# LOGISTICS SOLUTIONS AND SAFETY FIRST



