

FABRIC EXPANSION JOINTS

# NEW COMPONENT FOR HRSG BOILERS

The ultimate solution for thermal  
management in combined cycle plants



**NEW COMPONENT**  
textile solutions for heat treatment

# FROM AIR INTAKE TO BOILER OUTLET: NEW COMPOSIT'S COMPLETE COVERAGE

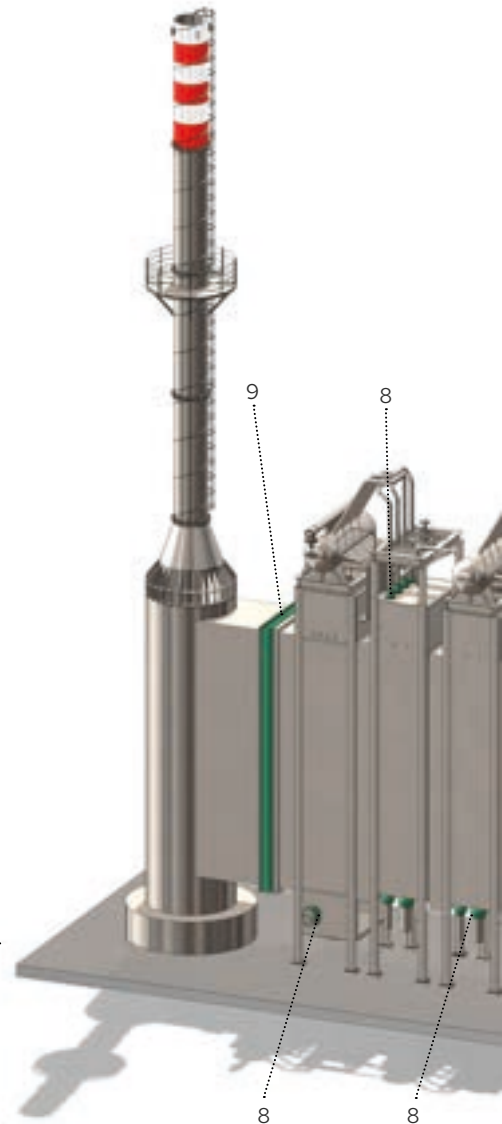
New Composit offers a wide range of **fabric expansion joints** for every section of **combined cycle plants equipped with Heat Recovery Steam Generators (HRSG)**, from the air intake to the gas turbine exhaust, including diverters, wall penetrations, and the stack.

Our expertise goes beyond supply, extending to assistance and preventive monitoring to ensure **uninterrupted and trouble-free operation**. With New Composit, you have a reliable partner for every fabric expansion joint need, with a particular focus on durability, high-temperature resistance, and the ability to accommodate complex movements.

## WHERE TO FIND FABRIC EXPANSION JOINTS?

Fig.1

*Fig.1: Fabric expansion joints applied to critical points in combined cycle plants, from boiler walls to the air intake and beyond, ensuring reliability and optimal performance.*





1. AIR INTAKE



2. GAS TURBINE INLET



3. GAS TURBINE OUTLET



4. DIVERTER INLET  
5. DIVERTER OUTLET 1  
6. DIVERTER OUTLET 2



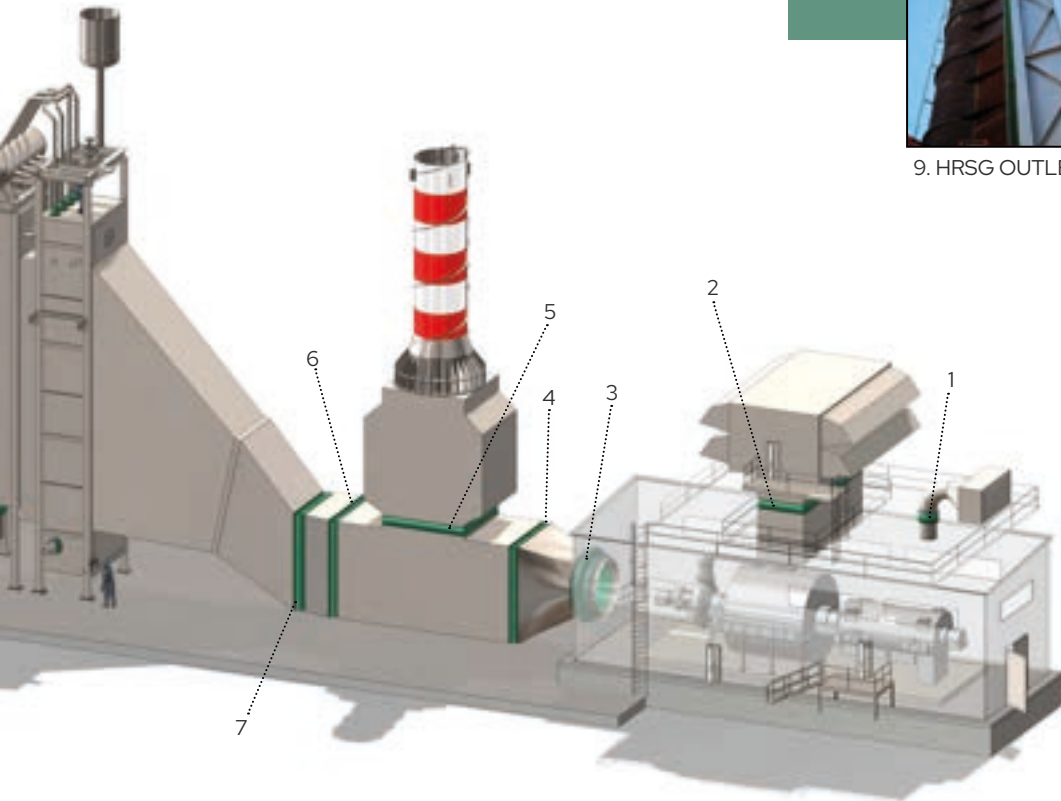
7. HRSG INLET



8. PIPE PENETRATIONS



9. HRSG OUTLET





# SUPERIOR PERFORMANCES WITH PIPERFLEX®: MORE THAN JUST AN EXPANSION JOINT

**New Composit** doesn't limit itself to standard solutions. With **Piperflex®**, we offer an advanced fabric expansion joint designed as the optimal alternative to traditional metallic joints.

When metallic joints begin to fail or break, **Piperflex®** is ready to deliver superior performance, **significantly reducing maintenance costs and operational downtime.**

**Piperflex®** is the ideal solution for those seeking more than a simple replacement: it's an investment in **long-term reliability and safety.**

## KEY TO HIGHER PERFORMANCE IN HRSG PLANTS


**Piperflex®** is the ideal solution for **managing thermal challenges in HRSG plants.** Designed to operate under **extreme conditions**, it provides excellent absorption and movement compensation, ensuring optimal thermal reduction while protecting the integrity of the plant. This translates into **significantly fewer unplanned shutdowns and lower maintenance costs.**

Due to its ability to absorb and compensate for complex movements, **Piperflex®** is particularly effective in **wall, roof, and floor penetrations of HRSG boilers.** These fabric expansion joints ensure **optimal management of axial and lateral movements**, helping maintain plant integrity even in high-stress environments.

# THE BEST ALTERNATIVE TO METAL COMPENSATORS FOR CRITICAL OPERATING CONDITIONS

Compared to metallic joints, **Piperflex®** offers greater reliability, particularly in the increasingly common **“stop & go”** operational mode of recent years. This operating mode subjects metallic joints to significant stress, considerably shortening their lifespan.

In contrast, **Piperflex®** is designed to absorb and compensate for movements without damage, avoiding accelerated wear that plagues metallic joints and preventing frequent and costly plant stoppages. The result is extended operational longevity and significantly reduced downtime.



For plant operators and maintenance personnel, **Piperflex®** stands out as the ideal solution to address issues associated with wall penetration metallic joints, which are often prone to failure and breakage.

When such a metallic joint inevitably fails, **replacing it with a Piperflex® joint** not only resolves the issue but also provides a longer-lasting, more reliable solution, ensuring **operational continuity** and avoiding expensive downtime.



# PIPERFLEX® IS DESIGNED FOR THE EXTREME

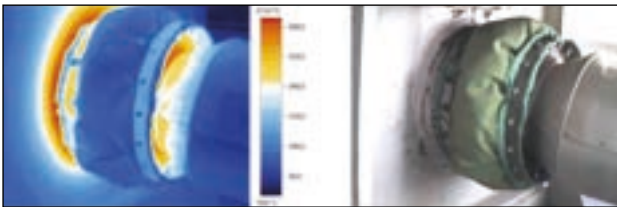
Piperflex® is specifically designed for use in **wall penetrations** of HRSG boilers. In these particularly demanding contexts, it effectively manages high temperatures and complex operational dynamics, ensuring system integrity and continuous operation – a crucial element for plant success.

Thanks to its ability to withstand temperatures **up to 900°C** and ensure excellent **gas tightness**, Piperflex® proves ideal for high-temperature applications, significantly contributing to improved overall plant performance.

## FABRIC EXPANSION JOINTS FOR WALL PENETRATIONS

Fig.2

*Fig.2: Piperflex® fabric expansion joint installation points in HRSG boilers: ideal solutions for managing critical passages and maintaining the structural integrity of the plant.*





1. ROOF



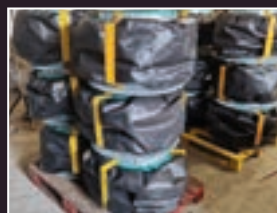
2. LATERAL



3. FLOOR



### FROM PRODUCTION TO INSTALLATION



# 40 YEARS OF EXPERIENCE AND INNOVATION WITH NEW COMPOSIT

Since 1986, **New Composit** has been developing customized solutions for industrial plants, with a particular focus on **fabric expansion joints**. We work to ensure reliable performance even under **the most complex operating conditions**, addressing the unique needs of each project.

In 2005, we decided to focus on **combined cycle power plants with HRSG boilers**, offering a comprehensive range of fabric expansion joints covering **all sections of the plant**, from air intake to the stack. This strategic decision stems from our experience and expertise, developed through years of **research and development**, to tackle the most challenging technical issues and always deliver high-performing, durable solutions.

We are referenced to provide **textile expansion joints in all critical areas of the plant**, ensuring that every section of it is handled with solutions of a high level. In particular, **Piperflex®** is designed to successfully address the challenges associated with to pass-wall joints, where mechanical and thermal stresses reach extreme levels.





# A FULL RANGE OF SERVICES FOR COMBINED CYCLE PLANTS

We provide 360-degree support to ensure the optimal functioning of your HRSG plant at every stage of the joint lifecycle, including preventive monitoring and swift interventions.



## **CUSTOM SOLUTIONS**

Tailored to the specific needs of each plant.



## **IN-HOUSE PRODUCTION**

Ensuring maximum quality and precision supervision.



## **ON-FIELD TECHNICAL SUPPORT**

Ensuring correct installation with attention to every operational detail.



## **SPECIALIZED INSTALLATION TEAM**

Guaranteeing precision and long-lasting operational efficiency.



## **RAPID REPAIRS**

Minimizing downtime and associated costs.



## **PREVENTIVE MAINTENANCE**

Designed to prolong system life and reduce intervention frequency.



## **THERMAL AND TECHNICAL ANALYSIS**

Identifying potential issues to improve performance and prevent future failures.

Our goal is to maintain maximum **operational efficiency** and minimise plant downtime. With a team of **highly specialised technicians and engineers**, New Composit is able to respond promptly to emergency situations **anywhere in the world**.

This service is essential to ensure the production continuity of combined cycle plants, where unplanned outages can have significant economic impacts.

## ADVANCED SOLUTIONS FOR INDUSTRIAL PLANTS

# EXPANSION<sup>®</sup> CONTROL SYSTEM

**New Composit's Expansion Control System** is a complete service that ensures total control over the thermal and mechanical behaviour of installations.

It includes:

- **AD HOC DESIGN**

Each project is customised and starts with an in-depth study of the operating conditions and a feasibility assessment, using room test simulations and advanced 3D or 2D engineering techniques.

- **PRODUCTION WITH FIRST-CLASS MATERIALS**

We use high-quality materials and state-of-the-art technology to produce joints that successfully meet the toughest operational challenges.

- **INSTALLATION BY A TEAM OF EXPERTS**

Our team of installers ensures that each joint is assembled with precision, guaranteeing optimal performance and long service life.

# THERMAL MANAGEMENT WITHOUT COMPROMISE? **NEW COMPOSIT** HAS THE CUSTOM SOLUTION FOR YOUR PLANT.



**New Composit** provides advanced and reliable solutions for managing thermal expansion and other critical challenges in industrial plants.

Our extensive experience enables us to offer tailored products and services to meet the specific requirements of your plant, ensuring efficiency and long-term reliability.

**Contact New Composit today for more information, to request a quote, or to schedule an inspection.**

We offer a free consultation to explain the benefits of our **"Expansion Control System"** monitoring and maintenance service, designed to optimize performance and extend the operational life of your joints.



WE KNOW HOW **TO PROTECT YOU**

*fabric expansion joints*



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