



**DATA REQUIRED TO ASSESS THE VIABILITY  
OF A TRANSPORTABLE HEAT PROJECT**

## INTRODUCING TURNBULL & SCOTT



### Who we are

- Established in 1933, we proudly celebrated our 90th birthday in 2023.
- We operate from a 60,000 sq ft manufacturing centre in Hawick in the Scottish Borders, and run a Design Hub in Edinburgh, with a total of 40 dedicated employees.

### What we do

- We design, manufacture and supply commercial space heating products, industrial heat exchanger, dry coolers, chillers and heat recovery systems.
- We have been developing an idea which would allow for the storage and transfer of waste heat energy.

### Who we serve

- Our customers include OEMs, EPCs, ESCos, end-users and specialist contractors right across manufacturing, construction and low carbon energy industries.



# INTRODUCING TURNBULL & SCOTT

## Our Promise

Our customers trust us to understand, solve and deliver the solution to their comfort or process heating, drying, cooling, chilling and energy saving challenges.



The central graphic features a circular process diagram with 'Trusted.' at its core. The cycle is defined by three main phases: '... to understand' (top), '... to solve' (right), and '... to deliver' (left). The '... to understand' phase includes 'Listen' and 'Probe'. The '... to solve' phase includes 'Concept exploration', 'Thermal balancing', 'Outline design', and 'Feasibility studies'. The '... to deliver' phase includes 'Detailed design', 'Structural integrity', 'Quality plans', 'Weld engineering', 'Manufacture', 'Procurement & Supply', and 'Install & Commission'. The cycle is completed by 'Maintain & Repair' and 'Life cycle support' at the top left.

## HEAT RECOVERY AND STORAGE

- The practice of heat recovery, particularly in 'heavy' industry is not new and we have been involved in the design and manufacture of heat exchanger coils for such purposes for many years.
- What is new however, is the pan-industry degree of focus on heat recovery driven by both energy cost reduction and Net Zero strategies, with initiatives addressing the former feeding into the latter, simultaneously.
- This has led to us spending an increasing amount of time working with customers across manufacturing and processing industries to assess energy saving opportunities and determine what's possible and indeed feasible.
- This has led to a recognition by the T&S team that there was an increasing number of enquiries from industrial customers that have excess waste heat but no immediate or near time use for any, or all, of the available energy.
- The opportunity for a solution emerged to developing the idea which would allow for the storage and transfer of waste heat energy.
- Our solution involves recovering surplus waste heat from industrial sites to a heat store, then transporting the heat store to a secondary site, or heat network where the heat can be discharged and reused. It combines the company's expertise in the design of heat exchangers with the use of phase change materials (PCMs).
- Having built our models, and a test unit, we are now seeking to identify potential demonstration sites. To determine the feasibility for these types of projects we need certain information from heat donor and heat recipient.



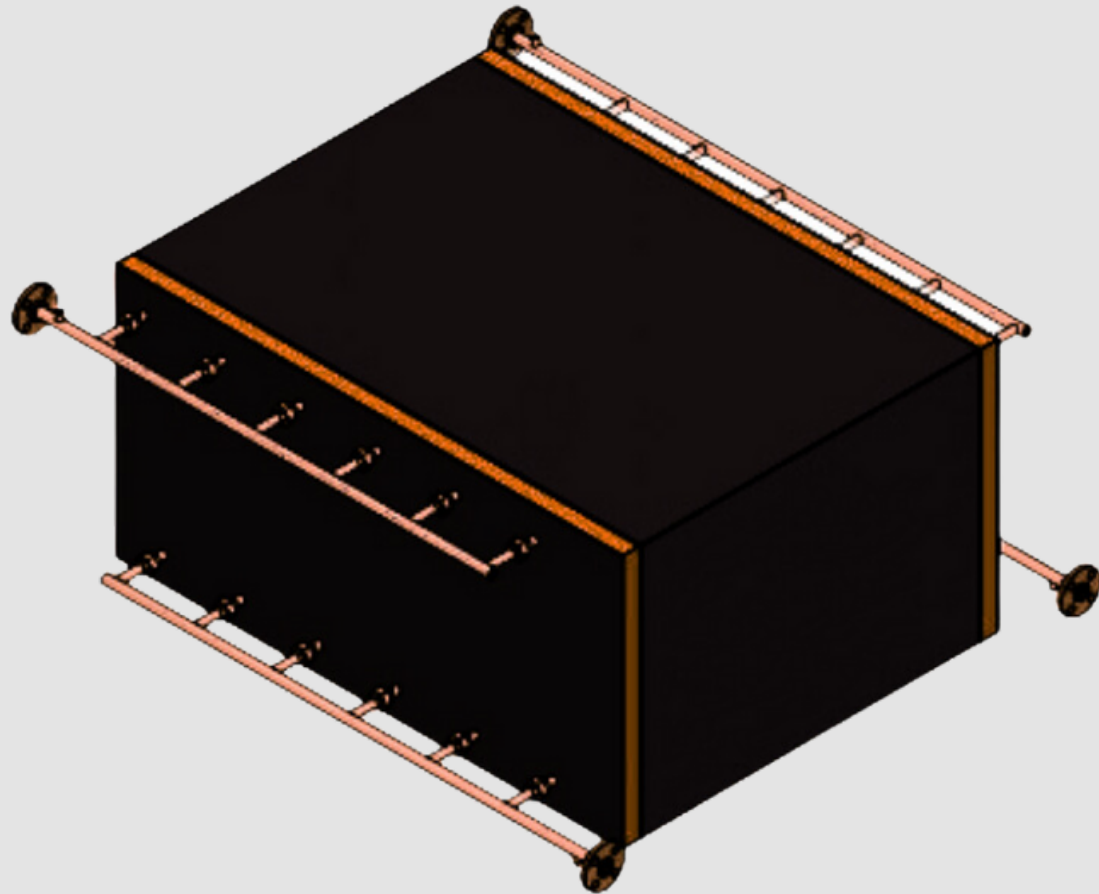
## HEAT RECOVERY AND STORAGE

### What we need from you

- As a Heat Donor: For us to consider the potential for recovering surplus heat we need to get an idea for the level of the temperature and volume of the gas which you have in your process. If you have significant volume of waste heat/stream and temperatures over 200°C, there is a good chance we will be able to provide a solution.
- As a Heat Recipient: You will ideally have large heat requirement. We will need to know the temperature and flow rate of the water in your process/factory.
- Note: sometimes the recipient may be the same site as the donor.



## HEAT RECOVERY AND STORAGE



**Get in touch!**

If you think that you have excess heat and have the information necessary, get in touch and share as much as you can and we will contact you.

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Turnbull & Scott™ 90  
Trusted. YEARS