



**Materials  
Processing  
Institute**

## **THE DOUBLE BOTTOM LINE: WHERE BUSINESSES CREATE POSITIVE SOCIAL IMPACT**

A Speech Given On The Inauguration Of A Recently Commissioned Artwork  
“Liquid Fire” At The Materials Processing Institute.

6th DECEMBER 2018



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## Introduction

Ladies and Gentlemen, it is a pleasure to welcome you here this evening, on the inauguration of the latest art work commissioned by the Materials Processing Institute. Before we hear more about the piece itself, I thought I would say a few words about why commissioning art and holding events such as this, is so important to the Institute.

## Societal and Ethical Mission

When the Institute returned to independent ownership in 2014, I wrote a new constitution, which embedded the philosophy of the 'double bottom line' into the DNA of the organisation. What this means is that as well as serving industry by developing and commercialising technology, the Institute aims to have a positive social impact in our local community.

This approach started with the incorporation of the Institute as a not-for-profit body and a switch to local sourcing, that resulted in an immediate injection of £1m per year into local businesses.

Employees have also been given a central role in the direction and governance of the Institute. At a time when politicians at the national level are debating the relative merits and pitfalls of employee representation at board level, we have instituted a system of democratically electing an employee representative to our governing Council, who sits as a registered director with the same powers and responsibilities as all of our non-executive directors. We have 10% employee ownership, an employee profit sharing scheme where the lowest paid receive relatively higher benefits than the highest paid, collective consultation and a commitment to pay the real living wage.

This approach to employee involvement is radical for some and yet for us, it is simply good business practice and the starting point for a societal and ethical mission, that aims to have a much wider impact on our local community. This is a relatively small organisation, but it has a unique capability, to act as a catalyst for economic growth and development in Redcar and throughout the Tees Valley region. That is why we have identified three areas where we can make a significant and sustained impact, which is distinctive, yet complementary to what others can achieve. These three areas are economic development, education and art and culture.

## Economic Development

In the area of economic development, it has long been identified that the local economy lacks the dynamic small business base that is needed to drive forward growth and prosperity. Four years ago we established our SME Technology Centre to address this problem, working in partnership with the Tees Valley Combined Authority. In this time we have worked with over 100 small businesses, providing technology, business and financial support, drawing down and disbursing European development funds and investing our own resources in free services available from our Spenceley Library, such as CE marking and intellectual property consultations.

Positioned as we are on the periphery of the South Tees Site, there is much more we can do. Having witnessed the phenomenal success of the AMRC research centre in Sheffield, in attracting inward investment to their Advanced Manufacturing Park, we aim to do the same here in Teesside for Advanced Materials, working in partnership with the South Tees Development Corporation.

Our job however, is significantly harder, relying as we do almost entirely on private resources, we will not have access to the £100m or so of government spending that was available to AMRC research centre. We must all acknowledge that where funding is needed to support this inward investment, it will have to be found locally.

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Yet already, with our deepening partnership with the Combined Authority, we have collectively been successful in winning the Liberty Powder Metals investment, originally destined for the Sheffield Advanced Manufacturing Park and now to take place here, at this very campus.

I am confident that working as an anchor institution and acting together in partnership with the Combined Authority and the South Tees Development Corporation, we can cement the place of Tees Valley in the national psyche as the natural home of advanced materials, low carbon energy and the circular economy.

Drawing on our international networks, excellence in project delivery and high success rate in public funding, we can ensure that new business will locate, cluster and thrive in Redcar, Middlesbrough and throughout the Tees Valley.

### Education

In the area of education, we know that as a mid-sized enterprise, we will not be able to make as great an impact in areas such as work placements, or apprenticeships as many of the larger employers in this region. What we can offer though are unique, specialised and life changing opportunities, for the brightest and best to stand shoulder to shoulder with their peers throughout the UK, regardless of their background.

It is for this reason that we have established a partnership with the Worshipful Company of Armourers' and Brasiers, a 700-year charitable foundation based in the City of London. This partnership has led to the establishment of a programme of support for PhD students and more recently the launch of our Millman Scholarships. Named after one of our recently retired employees with over 40 years' service, these scholarships are enabling students from this region to receive financial support to study at the best universities in the UK and benefit from specialist mentoring and paid internships throughout their programme of study.

We are also committed to life long learning, an area that I view as increasingly important as the 4th Industrial Revolution creates a demand for entirely new skills and renders decades of experience obsolete. That is why we have a close partnership with the Cleveland Institution of Engineers, a society for the education and re-education of those in work, that has been active in this region for over 150 years and which, I am pleased to say, has for more than 10 years been based here at our campus.

### Art and Culture

Finally, the third strand of our societal and ethical mission is art and culture. The reason why we are all here tonight. Whilst our involvement in economic development and education may seem self-explanatory, our support for art and culture, can take people by surprise, but there are four good reasons why this is important to us:

- i. Firstly, these artworks once commissioned can be enjoyed by our staff. I firmly believe that there is more to life than work and more to work than money. Art, sport, friendship and fun are all important parts of my life, as I am sure they are of yours and we can celebrate finding that at work as well as at home. At a time when anxiety, stress and depression are increasing risks in the workplace, we can recognise the important role of art and culture in improving the quality of life.
- ii. Secondly, we are commissioning works to support our local artistic community. Art needs patrons. However, if you are someone of real artistic talent, born and brought up in the North East, you lack access to patronage compared with other areas of the country. This is problematic for local artistic talent, that might never be realised and it is problematic for the region, which loses its artistic voice and the opportunity to highlight and develop our own distinctive culture.

iii. Third, our artwork reflects the heritage of North East England and Teesside – the Ironopolis, the Infant Hercules that only exists today thanks to the fortunate confluence of iron ore in the Eston Hills you can see behind the Institute, the Durham coal field, and the River Tees which enabled ships to transport our steel and chemicals out across the North Sea to every corner of the world. Steel and our industrial traditions permeate through the landscape, culture and identity of Cleveland just as Constable, Monet or Gauguin found inspiration in the countryside and gardens of Suffolk, Giverny or Tahiti. They help forge our local identity too.

iv. Because forth, and finally, this art, the product of the artist's work, is for the local community. Middlesbrough is one of the most deprived areas in the UK with Redcar not far behind. The people of Middlesbrough and Redcar have as much right as people from other parts of the country to experience original art commissions and we are giving them that opportunity. Those of you who, like me, visited the steelworks medical centre, no doubt developed the same emotional attachment to the mural painted by local artist Phillip Boville. This work was so well loved that on the closure of the medical centre it was transferred to the new Redcar and Cleveland Community Heart.

My final message is that these artworks are for all of us. I am not so bold to claim that in 100 years there will be so many visitors making a pilgrimage along the A66 to be inspired by the Institute, as the millions who visit Monet's garden in southern France today. However, I hope you will appreciate the artistic creativity, craft and skill that has gone into its creation. I would also like you to be proud of what it represents, both artistically and in terms of our commitment as a community here at the Institute to our local community.

Our societal and ethical mission here at the Institute, in economic development, education and art, is to make a difference in our local community. This mission is not just for the good times. It is a sincerely held and deep commitment for the long term and one which we will deliver in partnership with our friends in the Tees Valley Combined Authority, Redcar and Cleveland Borough Council and South Tees Development Corporation.



## Liquid Fire

Artist Stuart Langley has worked in collaboration with the Materials Processing Institute to design and realise a significant artwork which considers both the innovation role of the Institute and the physical qualities of neon as a material. Neon craft has remained largely unchanged since its first incarnation in 1910. The process of combining a noble gas with high voltage in a flame worked tube shares a scientific approach in common with the Institute, making this project a fascinating marriage of artist, institute and material.

Having spent time at the Institute and experienced first-hand the furnace in action during a melt, Stuart aimed to deliver an artwork which acknowledges the only steel furnace on Teesside and augments the sense of magic associated with both neon and the

on-site electric arc melting facilities. The title of the work 'Liquid Fire' refers to the pouring of molten alloy mixtures and is the term used to describe the spread of coloured light from early neon signage. The overall composition projects the awe-inspiring energy and drama of a melt in progress yet the linear lines of coloured glass, filled with neon gas hint at the detailed order and process at the core of the Institute's success, longevity and future. The complex outlines of the crest, realised in clear glass filled with argon gas and a drop of mercury, are restrained to a glowing single colour which, when viewed up close, mix with the colour saturated background to highlight the wonder and potential to be found in combining raw materials.

In this artwork, noble gases charged with high voltage and contained in flame worked glass mesmerise the viewer as a captivating experience of light to echo the almost infinite exploration of materials, processes and application at the Institute.



Stuart Langley is a Hartlepool based artist who uses art as a tool to change outlooks and offer an escape from the expected.

Inspired by fantastical worlds depicted in fantasy films and the staged realities of theme parks and coastal resorts, he works with light, colour, neon and digital to create moment of extraordinary, set in the everyday. His output centres on sculpture and installation with work having been commissioned from light festivals including the UK's largest - Lumiere Durham 2013 and 2015.

Stuart uses his art to explore the potential of colour and light in visual communication as a means of evoking instinctive and emotive responses from audiences.



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**Chris McDonald** is the Chief Executive Officer of the Materials Processing Institute. The Institute carries out industrial research and innovation in advanced materials, low carbon energy and the circular economy. Chris's background is in industrial research and manufacturing, where he has worked internationally. He led the divestment and return to independent, not-for-profit ownership of the Institute in 2014, the year the organisation celebrated its 70th anniversary.

In addition to leading the Institute, Chris provides expert consultancy support to companies, Governments and public bodies, in technology strategy and the technical due diligence aspects of mergers and acquisitions. He is prominent in the development of public policy, around innovation, steel and SMEs, where he works to support growth and inward investment. He is the policy chair for Innovation and Enterprise for the Federation of Small Businesses, a member of the CBI Regional Council for the North East and is the Innovation Lead for the UK Metals Council. Chris is also a member of the Steel Advisory Board for UK Steel (EEF).

A graduate of Cambridge University, Chris is a Fellow the Institute of Chemical Engineers and of the Institute of Materials, Minerals and Mining. He sits on industrial advisory boards at a number of universities, including Oxford and Sheffield.

He is often called to commentate in the media on innovation leadership and the steel industry.

**Chris McDonald**  
Chief Executive Officer  
Materials Processing Institute

“Chris provides expert consultancy support to companies, Governments and public bodies in materials, technology and innovation strategy”



## Materials Processing Institute

**The Materials Processing Institute is an independent, open access and not-for-profit technology and innovation centre working with industry, government and academia worldwide. Support ranges from small scale, site based investigations, through to long term collaborative research programmes.**

The Materials Processing Institute is expert in advanced materials, low carbon energy and the circular economy, specialising in challenging processes, particularly those involving high specification materials, high temperatures and difficult operating conditions.

The Institute has over 70 years' experience as a leading UK technology provider. Extensive materials processing knowledge is supported by state-of-the-art facilities with a broad range of equipment, from laboratories through to demonstration, scale-up and production plant.

Scientists and engineers work with industry and apply their expertise to develop and implement robust solutions to research and development and improvements for products and processes.

**Expertise is spread across a wide range of disciplines, including:**

- > Materials Characterisation, Research and Development
- > Simulation and Design
- > Monitoring, Measurement and Control in Hostile Environments
- > Process Development and Upscaling
- > Specialist Melting and Steel / Alloy Production
- > Engineering / Asset Management
- > Materials Handling
- > Minerals and Ores

**Research and project management teams deliver support across a wide range of industrial and manufacturing sectors including:**

- > Metals and Metals Manufacture
- > Chemicals and Process
- > Nuclear
- > Oil & Gas
- > Energy
- > Aerospace and Defence
- > Mining and Quarrying



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