

# Nomination Form 2014 Gas Industry Awards

I wish to make a nomination for the 2014 Gas Industry Awards for the category indicated below  
(please place a tick in the appropriate box and use separate form for each nomination)

- |                                                               |                                                           |
|---------------------------------------------------------------|-----------------------------------------------------------|
| <input type="checkbox"/> Manager of the Year Award            | <input type="checkbox"/> Company of the Year Award        |
| <input type="checkbox"/> Engineer of the Year Award           | <input type="checkbox"/> Industry Leadership Award        |
| <input type="checkbox"/> Industry Safety Award                | <input type="checkbox"/> Young Person's Achievement Award |
| <input checked="" type="checkbox"/> Industry Innovation Award | <input type="checkbox"/> Sustainable Energy Award         |
| <input type="checkbox"/> Customer Service Award               |                                                           |

## Company being nominated

Name - Capita / National Grid

Company and Address – Capita, 6 Bowood Court, Calver Road, Warrington

Post Code WA2 8QZ  
Telephone 01925 418 333  
Fax 01925 418 800  
Email [business.support@capita.co.uk](mailto:business.support@capita.co.uk)

## Reasons for Nomination - Up to thirty words to form the basis of the citation

Please see attached sheet

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## Four bullet points detailing achievements or other criteria for assessment

- A) Current steel pipe supports are heavy, expensive, and difficult to maintain and replace. Research of alternative materials and designs of pipe supports, undertaken in this innovation project, has led to the successful design of a support solution using composite materials.
- B) The new design of pipe support will reduce the maintenance cost associated with current steel pipe support by up to 50% as a result of lower unit cost of manufacture, removing the need to break out and replace the concrete plinths and removing the installation costs of lifting equipment and multiple manual handling.
- C) By designing a lightweight modular composite system that is easy to install; removes the safety risk of unsafe manual handling and the requirement for lifting equipment.
- D) Using composite materials removes the inevitable corrosion occurrence on the associated critical pipe (with steel pipe support) but significantly improves the overall loading capabilities compared with steel.

## Other supporting information to assist the Judges to reach a decision

Please see attached sheet

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(please continue on a separate sheet, if necessary)

**Nominator:**

Name – Karl Johnson Title Dr/Mr/Mrs/Ms/Other

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Telephone 01925 418 333 / 07711 671644  
Fax 01925 418 800  
Email\* [karl.johnson@capita.co.uk](mailto:karl.johnson@capita.co.uk)

Context in which Nominee is known - Director - Cost & Project Management

Signature -  Date – 25.02.2014

\* This information will be used to contact nominators so please provide direct contact information  
Please send completed forms to: Gas Industry Awards 2014, Institution of Gas Engineers and Managers, IGEM House, High Street, Kegworth, Derbyshire, DE74 2DA marked "Awards Nomination - Confidential" E-mail address: [gasawards@igem.org.uk](mailto:gasawards@igem.org.uk)  
**CLOSING DATE FOR NOMINATIONS TO BE RECEIVED: Friday 14<sup>th</sup> March 2014**  
A copy of the Award Scheme Rules and Notes for Guidance is available on the IGEM Website: [www.igem.org.uk](http://www.igem.org.uk) or on request by e-mail to [lesley@igem.org.uk](mailto:lesley@igem.org.uk)  
Tel: 01509 678167 Institution of Gas Engineers and Managers, IGEM House, High Street Kegworth, DE74 2DA Registered Charity No 214011

### Reasons for Nomination – (30 words)

This innovative project has led to the successful design of a support solution using composite materials. As well as the huge benefits associated with safety of installation it provides significantly reduced maintenance costs. (31 words)

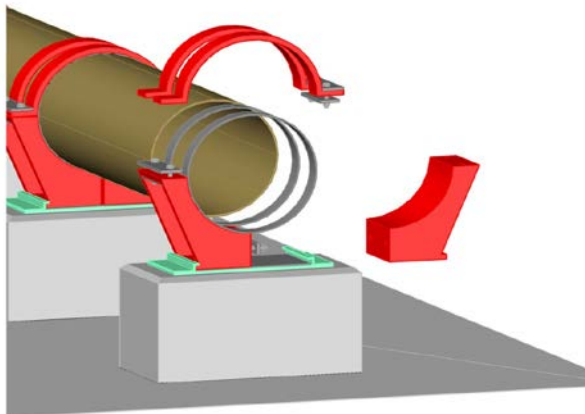
### Other supporting information to assist the judges to reach a decision

Existing steel pipe supports require extensive manual handling for inspection and are costly to remove and replace often results in damaging or breaking-out of the associated concrete plinth.



The lower 180° of pipe cannot be readily accessed for in-service inspection or maintenance.

Research of alternative types of pipe supports undertaken in this innovation project has led to the successful design of a support solution using composite materials.



Split lower 180° permits support removal & re-fitting.  
But use of steel as the structural material retains high component weights.  
Use of non-metallic composite as the structural material reduces component weights.

Certain large diameter steel pipe supports cannot be removed without breaking them out of the concrete plinths supporting them in order to inspect for corrosion between the metallic surfaces. The steel pipe supports are very heavy, typical 600DN component weighing in excess of 100kg, and present manual handling issues during both removal and replacement.

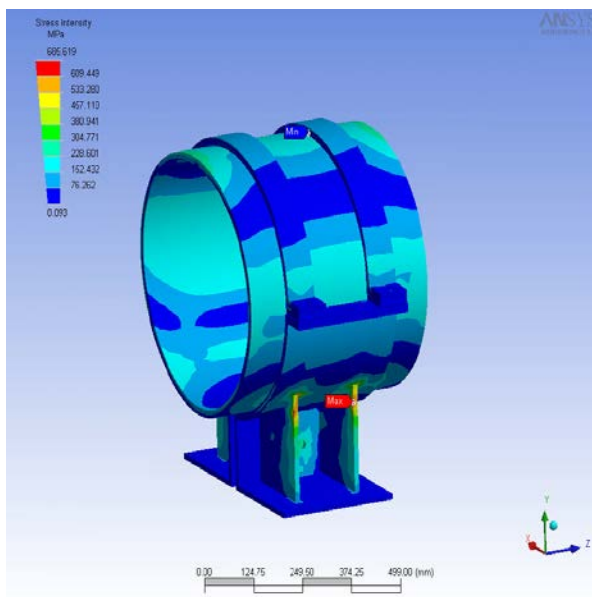
The aim of this innovation project was two-fold; to research the use of composite materials as an innovative alternative to steel supports; and to develop an alternative design that would remove the existing manual handling issues and allow for inspection without the need to damage or break out the associated concrete plinths. The new composite design would also eliminate the inherent corrosion risk that is present in existing materials.

The project strategy to identify and deliver an alternative solution to the existing pipe support materials and design included a prototype of the newly designed composite pipe support.

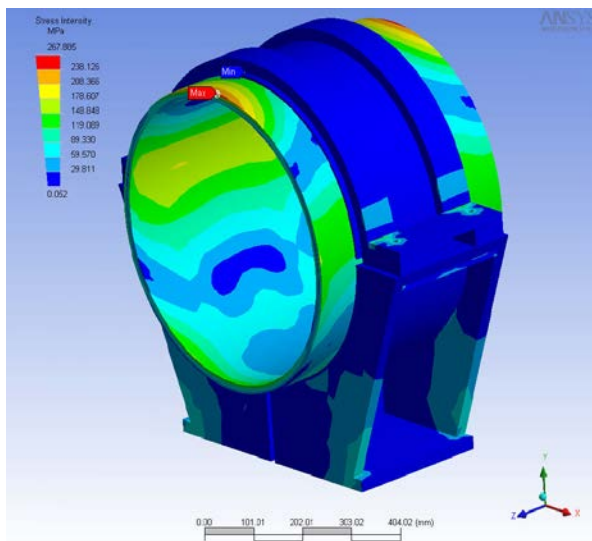
A prototype DN600 composite support has been manufactured and the heaviest component being 21kg

National Grid as project sponsor has supported the process and has nominated the product for their Chairman's Award. The design has sailed through numerous 'Peer Reviews' within National Grid to great acclaim.

Subsequently the basis of design and finite element analysis results have been presented to a meeting of the engineering team from Capital Delivery Gas Transmission. As demonstrated below the composite pipe support although considerably lighter in weight is significantly strong in load bearing properties. In fact, the lower graphic indicates that the carrier pipe will fail under stress long before the composite pipe support would.



DN600 CARBON STEEL PIPE SUPPORT WITH 50t VERTICAL ONLY FORCE APPLIED



DN600 COMPOSITE MATERIAL PIPE SUPPORT (25mm webs & wrapper) WITH 50t VERTICAL ONLY FORCE APPLIED

As the photograph shows below the prototype has been installed at the new National Grid Eaking Training Centre for demonstrative purposes.

