

Thermo-mechanical Controlled Processing (TMCP) A Decade of Progress, Where Next?

**Royal Society, London
Wednesday 10th July 2013**



beta
technology . . .

Thermo-mechanical Controlled Processing (TMCP) A Decade of Progress, Where Next?

Dr Naila Croft

Beta Technology Ltd

**International Coordinator of The
Charles Hatchett Award**



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Dr Phil Kirkwood

Cresswell Consultants, UK



Celebrating 35 Years



The Charles Hatchett Award 1979 - 2013

CHARLES HATCHETT SEMINAR 2013

Rio de Janeiro, December 1978



Morris Pearl, Malcolm Gray, Friedrich Heisterkamp and Bob Keown meeting in Rio de Janeiro, December 1978 to finalise Charles Hatchett Award Procedures

The Charles Hatchett Award Categories

HSLA

High Strength Low Alloy, Microalloy Steels

FERROUS

Other Steels, e.g. Engineering, Tool, Stainless

NON FERROUS

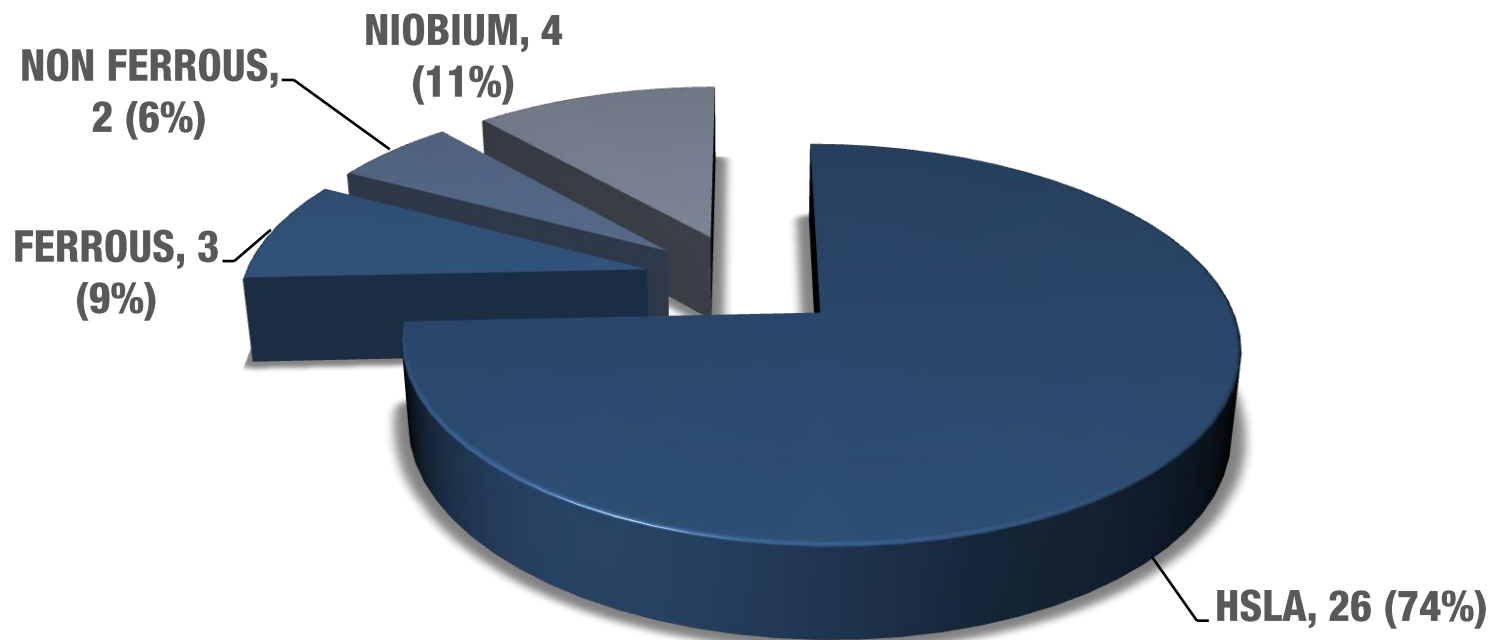
Nickel-Based, Ceramic-Based, Intermetallic Alloys

NIOBIUM

Niobium Metal, Niobium-Based Alloys

Thirty Five Years of the Charles Hatchett Award

TOPICS



A New Initiative 2008

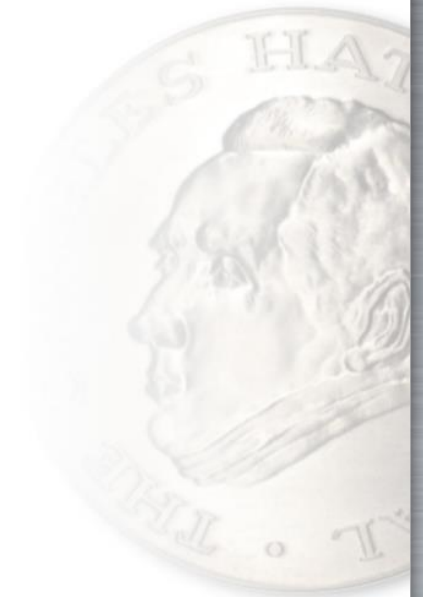
Seminars to be held in conjunction with Awards Ceremony to enable presentation of the winning paper and the presentation of supporting themed technical contributions from world experts.

This year our theme is TMCP

Charles Hatchett Seminar 2013

Thermo-mechanical Controlled Processing (TMCP)

A Decade of Progress, Where Next?



Where Next?

Do we know the way?
or
Do we think we do?

Where Next?

**Think about it as you listen today
but also consider the following:**

Where Next?

They knew the way and went to seek you along the narrow lane, but I wandered abroad into the night for I was ignorant.

I was not schooled enough to be afraid of you in the dark, therefore I came upon your doorstep unaware.

The wise rebuked me and bade me gone, for I had not come by the lane.

Sir Rabindranath Tagore (1916)

AGENDA

10.00	Welcome and Introduction	Dr Naila Croft, Beta Technology, UK Dr Phil Kirkwood, Cresswell Consultants, UK
10.10	The Royal Society	Professor Martyn Poliakoff CBE FRS, The Royal Society, UK
10.15	The Charles Hatchett Award 2013 Lecture: 'Strengthening Mechanisms and Their Relative Contributions to the Yield Strength of Microalloyed Steels'	Dr Jungfang Lu, Enbridge Pipelines Inc., Canada
10.45	Application of Nb in TMCP Steel Plates for Linepipe and Structural Applications	Volker Schwinn, Dillinger, Germany
11.05	Production of Helical Two Step Pipe – Use of Microalloying Elements to Improve Strength for Grades up to X70 with Sour Service Resistance	Dr Franz Martin Knoop, Salzgitter Mannesmann GroBrohr, Germany
11.25	Coffee	
11.55	Advances in Thermo-Mechanical Rolling of Nb Microalloyed Steel in Compact Strip Rolling	Professor Mani Subramanian, McMaster University, Canada
12.15	Review on Thermo-Mechanical Control Steel Plates and their Commercialisation	Dr Kazutoshi Ichikawa, Nippon Steel & Sumitomo Metal Corporation, Japan
12.35	Low Carbon HTP Structural Plate: A Paradigm Shift	Dr J Malcolm Gray, Microalloyed Steel Institute, USA and Dr Phil Kirkwood, Cresswell Consultants, UK
12.55	Concluding Remarks	Dr Eduardo Ribeiro, CBMM, Brazil
13.15	Lunch	

CHARLES HATCHETT SEMINAR 2013

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Professor Martyn Poliakoff CBE FRS
The Royal Society, UK



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**Dr J Malcolm Gray,
Miroalloyed Steel Institute, USA**

