

## Technical Committee 18 Marine Energy



### Annual Report 2013

#### Scope

The committee follows and contributes to the work of IEC TC 114 Marine energy - Wave, tidal and other water current converters

To prepare international standards for marine energy conversion systems. The primary focus will be on conversion of wave, tidal and other water current energy into electrical energy, although other conversion methods, systems and products are included. Tidal barrage and dam installations, as covered by TC 4, are excluded.

The standards produced by TC 114 will address:

- ° system definition
- ° performance measurement of wave, tidal and water current energy converters
- ° resource assessment requirements, design and survivability
- ° safety requirements
- ° power quality
- ° manufacturing and factory testing
- ° evaluation and mitigation of environmental impacts

#### International TCs Shadowed by this TC

**IEC TC114 Marine energy - Wave, tidal and other water current converters**

#### Irish Industry/Sector Served by this TC

All parties who have an interest in Marine Energy

## Technical Committee 18 Marine Energy

### 1. Review of the Year 2013

The Committee meets twice a year and a number of the committee members attend PT/WG meetings throughout the year. The Chairman attended the IEC TC114 plenary meeting in Tokyo in May. We are also represented by nominated experts from our committee at all the current Project Teams/Working Group of TC114. It should be noted that the committee is extensively represented on these PT's resulting in Ireland having a strong influence on the development and content of the standards being produced. PT 62600-103 is now set up and Brian Holmes is the Project Leader. This continued representation is vital in maintaining Ireland's position as one of the leaders in Wave and Tidal Power development.

#### The Project Teams/WG and Irish Experts are as follows

| Project Number | Description  | Irish Expert              |
|----------------|--|---------------------------|
| PT626-101      | Wave Resource Characterisation & Assessment  | B Holmes, M O'Cathain     |
| PT626-201      | Tidal Resource Characterisation & Assessment   | C Boake, C O'Kelly        |
| PT62600-2      | Design requirements for marine energy systems  | J Fitzgerald, R Alcorn    |
| PT62600-100    | Performance Assessment of Wave Energy Converters   | J Tedd                    |
| PT62600-200    | Performance Assessment of Tidal Energy Converters  | J MacEnri, P Brewster     |
| PT 62600-102   | Wave energy converter power performance assessment at a second location using measured assessment data   | J Weber, T Lewis          |
| PT 62600-103   | Guidelines for the early stage development of wave energy converters: Best practices and recommended procedures for the testing of pre-prototype scale devices | B Holmes                  |
| PT62600-10     | Assessment of mooring system for marine energy converters  | P Brewster<br>W Sheng     |
| PT62600-20     | Guideline for design assessment of Ocean Thermal Energy Conversion (OTEC) system   | No member                 |
| PT62600-30     | Electrical power quality requirements for wave, tidal and other water current energy converters  | F Sharkey, Sara Armstrong |

To facilitate this level of contribution we have set up consultative groups for each of the groups above. One member of the each group has been nominated as convenor and arranges ad hoc meetings as necessary.

## 2 Membership

As the work of IEC TC114 has expanded significantly we have added to the membership in order that we can contribute in a meaningful way to all PT's and WG's.

### **Chairman John Fitzgerald ESBi**

Secretary Fran Mackey NSAI

|                   |                      |
|-------------------|----------------------|
| Brian Holmes      | UCC                  |
| Jochem Weber      | Wavebob              |
| Cuan Boake        | QUB                  |
| Tony Lewis        | UCC                  |
| Ray Alcorn        | UCC                  |
| Michael O'Cathain | SSE Renewables       |
| James Tedd        | ESBi                 |
| Paul Brewster     | Pure Marine          |
| Garth Bryans      | Aquamarine           |
| Sue Barr          | Open Hydro           |
| Charlotte O'Kelly | TechWorks Marine Ltd |
| Fergus Sharkey    | ESBi                 |
| Sara Armstrong    | UCC                  |
| Wanan Sheng       | UCC                  |

### **Circulation**

|               |              |
|---------------|--------------|
| Peter Coyle   | MRiA         |
| Colm deBurca  | ESBi         |
| John Ringwood | NUIM         |
| Eugene Doogan | Wavebob      |
| John Keating  | Ocean Energy |
| Eoin Sweeney  | SEAI         |

## 3 International Meetings 2013

The IEC TC114 Plenary was held in May in Tokyo. John Fitzgerald attended.

PT/WG meetings were held during the year. Some were actual meeting and others were by telephone or webex. These meetings were attended by the Irish experts and we continue to have a major influence on the documents being produced and the work and time commitment required to maintain this influence in IEC TC 114 is of great benefit to Ireland.

Brian Holmes is the Project Leader of PT 62600-103 and the development work of this group is at an early stage.

## 4 Programme for the coming year

It is intended to hold at least two committee meetings and the IEC TC114 plenary meeting is due to take place in Vancouver in April 2014. Nominated experts will continue to work through the PT's and WG and meet when necessary, including the consultative groups