INTECNO-DHI
WATER & ENVIRONMENT

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WAT-MET WATer METhodologies

WATER METHODOLOGY WORKSHOP

"THE DEVELOPMENT AND APPLICATION OF MIKE 21 HD AND MIKE 21 CURVILINEAR IN ITALY"

Centro Congressi Torino Incontra,
via Nino Costa, Torino

Wednesday 24 May 2000
09.30 - 13.00

ARRANGED BY INTECNO - DHI

BACKGROUND

Recently *INTECNO-DHI* has undertaken an important job for the Po River Authority related to the two-dimensional simulation of the inundation of the City of Alessandria, along the Tanaro River. The 2D model has been based on the LIDAR survey with good resolution of the topography information. The results have been represented in a 3D way using a MIKE 21-ArcView 3D Analyst interface.

MED INGEGNERIA, in collaboration with *INTECNO-DHI,* has signed a contract for a new task to be performed for the Po River Authority. The job relates to the navigation on the Po River. Part of the study will be dedicated to the investigation of the hydraulic phenomena caused by the navigation structures, especially jetties in the low water river course which can create good conditions for the navigation concentrating the river flow. However, at the same time, they can represent obstacles for the flood discharge increasing the flood water level and the river bed excavation.

The interaction between the river and the quarry lakes created by excavations on the river sides present another important subject of the river hydraulic studies. Therefore, a certain part of the job may be focussed on this item as new legislation requires the verification of the interaction phenomena.

MIKE 21 is becoming very important not only for the coastal hydraulics but also for the river studies. At times, the use of MIKE 21 HD poses obstacles related to the geometry schematisation as well as for the stability of the calculation in certain circumstances. MIKE 21 Curvilinear can represent a significant step towards analysing the river hydraulics.

In mid-May a group of *INTECNO-DHI* senior experts will work together in order to analyze the application of MIKE 21 HD for river problems; the capabilities of MIKE 21 Curvilinear; and how MIKE 21 C, instead of MIKE 21 HD, can be used in the application on the river hydraulics. The point of departure for these internal experts discussions will be the analysis of the Alessandria flooding event together with other relevant experiences in this field.

On Wednesday 24 May 2000 the conclusions of the internal working group will be presented in an *INTECNO-DHI* **WAT**er **MET**hodology ("WAT MET") workshop for the discussions and recommendations of highly qualified and specially invited experts in the water sector in Italy.

The WAT MET workshop will concentrate on river methodologies with special emphasis on MIKE 21 HD and MIKE 21 Curvilinear.

The WAT MET workshop will describe and analyze the use of MIKE 21 HD and MIKE 21 C through relevant case studies.

Towards the end of the day the workshop participants will have:

- **analyzed and identified the conditions for successful river methodologies related to MIKE 21 HD and MIKE 21 C;**
- **given recommendations for further actions.**

PROGRAMME

09. 30 - 09.45 **PRESENTATION OF *INTECNO-DHI* AND THE IMPORTANCE OF WAT MET WORKSHOPS**

Carlo Malerba, Managing Director, HYDRODATA S.p.A.; Deputy Chairman, *INTECNO-DHI*

09.45 - 10.15 **NUMERICAL MODELS FOR RIVERS: AN OVERVIEW 1)**

Geoffrey Wilson, senior DHI MIKE 11 expert; specially attached to project for the definition of flood forecasting management and information system (based upon numerical simulation) for the river basins of Piemonte Region, Italy ("FF Piemonte Project")

10.15 - 10.30 **INTRODUCTION TO THE TWO DIMENSIONAL SIMULATION OF THE RIVERS. MIKE 21.**

Marco Gonella, Director, MED INGEGNERIA S.r.l.; senior hydro-informatics expert, HYDRODATA S.p.A.

10.30 - 10.50 **THE ALESSANDRIA INUNDATION STUDY PERFORMED FOR THE PO RIVER AUTHORITY**

Marco Gonella, Director, MED INGEGNERIA S.r.l.; senior hydro-informatics expert, HYDRODATA S.p.A.

10.50 - 11.10 **APPLICATION OF MIKE 21 HD FOR THE ANALYSIS OF THE INTERACTION WITHIN RIVER AND QUARRY LAKES.**

Paolo Polo, project manager, MED INGEGNERIA S.r.l; senior hydro-informatics expert in MIKE 11, MIKE 21, LITPACK.

11.10 - 11.25 **COFFEE BREAK**

11.25- 11.45 **PRESENTATION OF MIKE 21 CURVILINEAR. THEORETICAL ASPECTS. 2)**

Kim Wium Olesen, Head of River Hydraulics Department, Water Resources Division, DHI - Water & Environment. Involved in several research and consultancy projects on sediment transport and morphological modelling in rivers with non-uniform sediment.

11.45 - 12.15 **MIKE 21 CURVILINEAR. CASES OF APPLICATION. 3)**

Kim Wium Olesen, Head of River Hydraulics Department, Water Resources Division, DHI - Water & Environment. Involved in several research and consultancy projects on sediment transport and morphological modelling in rivers with non-uniform sediment.

12.15 - 13.00 **PLENARY DISCUSSIONS. CONCLUSIONS AND RECOMMENDATIONS.**

Chairperson: Marco Gonella, Director, MED INGEGNERIA S.r.l.; senior hydro-informatics expert,

1 Intervention will be in English. Summary will be provided in Italian
2 Intervention will be in English. Summary will be provided in Italian
3 Intervention will be in English. Summary will be provided in Italian

SCHEDA DI PARTECIPAZIONE

"THE DEVELOPMENT AND APPLICATION OF MIKE 21 HD AND MIKE 21 CURVILINEAR IN ITALY"

Mercoledì 24 Maggio 2000 h 9.30 - 13.00

Centro Congressi Torino Incontra,
via Nino Costa, Torino

Nome e cognome.....

Qualifica.....

Ente/società di appartenenza.....

Via.....

Cap.....**Città**.....

Tel.....**Fax**.....**E-mail**.....

La partecipazione al convegno é gratuita.

Per motivi organizzativi, si prega di confermare la presenza alla Segreteria entro il 15 maggio 2000.

Segreteria organizzativa: ***INTECNO-DHI***, **via Pomba, 23 - 10123 Torino.**
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