#### Wednesday, December 7<sup>th</sup> 2011

- 10.00 Official Opening of the Conference. A keynote speech by Proffesor Antoni Tajduś, Rector of University of Science and Technology in Cracow and by Proffesor Stanisław Gucma, Rector of Maritime University in Szczecin.
- 10.20 **Prof. Maciej Kaliski Ph.D. Eng.,** Undersecretary of State in the Ministry of Economy, An introduction lecture: *Mineral resources and the development of humankind.*

#### First Session

- Chairman: Associate Professor Piotr Czaja Ph.D. Eng., AGH University of Science and Technology
- 10.45 **Prof. Bolesław Mazurkiewicz Ph.D. Eng.,** The Maritime University of Szczecin: Offshore mining of raw resources of the sea and ocean bottom as the principal task for the state maritime policy.
- 11.00 Tomasz Abramowski Ph.D. Eng., A Chief Executive Officer of Interoceanmetal Joint Organization (IOM), Prof. Ryszard A. Kotliński Ph.D., The University of Szczecin: Contemporary challenges in exploitation of the ocean polymetallic deposits.
- 11.15 Associate Professor Krzysztof Szamalek, Ph.D., The University of Warsaw, Associate Professor Wlodzimierz Mizerski, Ph.D., Polish Geological Institute National Research Institute: Sea-bed mineral resources current knowledge and perspectives.
- 11.30 **Prof. Ryszard A. Kotliński Ph.D.,** The University of Szczecin: *Clarion-clipperton nodule field a future source of mineral deposits.*
- 11.45 **Prof. Adam Piestrzyński Ph.D. Eng.,** University of Science and Technology: World ocean mineral commodities.
- 12.00 Associate Professor Jerzy Hajduk Ph.D. Eng. Master Mariner, Maritime University of Szczecin: Safety of mining operations on the deep sea.
- 12.15 Discussion
- 12.30 Lunch break

#### Second Session

Chairman: Associate Professor Jerzy Hajduk Ph.D. Eng. Master Mariner, Maritime University of Szczecin

- 13.30 Associate Professor Jacek Mucha Ph.D. Eng., Monika Wasilewska Ph.D. Eng., University of Science and Technology, Prof. Ryszard A. Kotliński Ph.D., The University of Szczecin: Polymetallic nodules resources procedures and requirements for their estimation in IOM area (Clarion Clipperton fracture zone)
- 13.45 Tomasz Abramowski Ph.D. Eng., A Chief Executive Officer of Interoceanmetal Joint Organization (IOM), Prof. Tadeusz Szelangiewicz Ph.D. Eng., West Pomeranian University of Technology in Szczecin: Exploitation polymetalic nodules with deep seabed.
- 14.00 **Associate Professor Lech Rowiński Ph.D. Eng.,** Gdansk University of Technology: *Getting polymetallic nodules using autonomous underwater vehicles.*
- 14.15 Prof. Daniel Duda Ph.D. Eng. Master Mariner.,
  Associate Professor Andrzej Królikowski Ph.D. Eng.
  Master Mariner., Polish Naval Academy in Gdynia,
  Ryszard Wróbel Ph.D. Eng., Wiktor Koszalkowski
  M.Sc, Maritime Office in Gdynia: Survey on
  international standard for the safe management and
  operation of ships and for pollution prevention (ISM
  Code) based on the example of mobile offshore drilling
  units.
- 14.30 **Prof. Lech Kobyliński Ph.D. Eng.,** Fundation for safety of navigation and environment protection: *Some hazards to safety of offshore mining operations.*
- 14.45 Coffee break
- 15.15 Teresa Abaramowicz-Gerigk Ph.D. Eng., Associate Professor Zbigniew Burciu Ph.D. Eng. Master Mariner, Gdynia Maritime University: Operational problems of evacuation systems.
- 15.30 **Miroslaw Gerigk Ph.D. Eng.,** Gdansk University of Technology: A method of safety assessment of ocean engineering objects oriented on the object performance and risk assessment. Procedure of safety management of a damaged object at sea.
- 15.45 **Jerzy Kicki Ph.D. Eng.,** University of Science and Technology: Exploitation of natural resources from seas and oceans floor why and when?
- 16.00 Prof. Wiesław Kozioł Ph.D. Eng., Łukasz Machniak M.Sc., Andrzej Ciepliński M.Sc., Joanna Goleniewska M.Sc., University of Science and Technology: Aggregates exploitation of sea areas in Poland and UE.

- 16.15 Lukasz Maciąg M.Sc., Prof. Ryszard A. Kotliński Ph.D., Prof. Ryszard K. Borówka Ph.D., The University of Szczecin: Lithological variability of siliceous clayey silts from IOM area (Clarion-Clipperton Fracture Zone, East Pacific)
- 16.30 Prof. Stanislawa Sanak-Rydlewska Ph.D., Agnieszka Gala M.Sc., University of Science and Technology: Methods of recovery of some metals from oceanic nodules.
- 16.45 **Dorota Pyć Ph.D.,** The University of Gdańsk: *Offshore mining and sustainable environmental governance*
- 17.00 Anna Rabajczyk Ph.D., The Jan Kochanowski University of Humanities and Sciences in Kielce: Environmental threats resulting from methane clathrate extraction: an environmental impact assessment.
- 17.15 Claudia Jacaszek, Deutschland: Marine mining of aggregates from the North Sea and its influences on the environment
- 17.30 Discussion
- 17.45 Close up the first day of conference
- 19.00 Ceremonial supper

#### Thursday, December 8th 2011

#### Third Session

Chairman: Prof. Bronisław Barchański Ph.D. Eng.,

University of Science and Technology

- 10.00 Prof. Bernard Wiśniewski Ph.D. Eng., Maritime University of Szczecin, Tomasz Wolski Ph.D., The University of Szczecin: The hydrometeorological protection of Clarion - Clipperton zone.
- 10.15 Andrzej Bak Ph.D. Eng. Master Mariner, Maritime University of Szczecin: Positioning systems and basemap used in "offshore" industry on example of Fugro implementation.
- 10.30 Associate Professor Waclaw Morgaś Ph.D., Associate Professor Zdzisław Kopacz Ph.D., Polish Naval Academy in Gdynia: Marine mining in the human activity at sea.
- 10.45 Prof. Daniel Duda Ph.D. Eng. Master Mariner, Associate Professor Andrzej Królikowski Ph.D. Eng. Master Mariner: Polish Naval Academy in Gdynia: Polish Exclusive Economic Zone (EEZ) marine

- environment protection supported by aircraft monitoring.
- 11.00 Katarzyna Żelazny Ph.D. Eng., Prof. Tadeusz Szelangiewicz Ph.D. Eng., West Pomeranian University of Technology in Szczecin: Shape deformation of vertical mining pipeline.
- 11.15 Kazimierz Szefler Ph.D., Benedykt Hac Ph.D. Eng., Prof. Stanisław Rudowski Ph.D., Lucjan Gajewski, Lukasz Gajewski Eng., Maritime Institute in Gdańsk: Methods of the sea bottom studies in relation to estimation of the mineral aggregates resources within the Bay of Koszalin.
- 11.30 Coffee break
- 12.00 **Dominik Zawadzki M.Sc., Prof. Ryszard A. Kotliński Ph.D.,** The University of Szczecin: Conditions of the occurrence and distribution prospective ferromanganese oxide deposits.
- 12.15 **Arkadiusz Tomczak Ph.D. Eng. Master Mariner,** Maritime University of Szczecin: *Modern methods of underwater positioning applied in subsea mining.*
- 12.30 Katarzyna Żelazny Ph.D. Eng., Prof. Tadeusz Szelangiewicz Ph.D. Eng., West Pomeranian University of Technology in Szczecin: Loads and tensions of vertical mining pipeline.
- 12.45 Remigiusz Dzikowski M.Sc. Master Mariner, Piotr Głogowski M.Sc. Master Mariner, Maritime University of Szczecin: Prediction for the oil spillage expansion due to the potential leakage from the oil rig in the northeastern part of the Caspian Sea.
- 13.00 Kinga Lazuga M.Sc., Pawel Górtowski M.Sc. Chief Officer, Maritime University of Szczecin: Analysis of the influence of oil spill on effectiveness of the SAR action using SARMAP and OILMAP simulators
- 13.15 Discussion
- 13.30 Lunch break

## Fourth Session Chairman: Prof. Wojciech Ślączka Ph.D. Eng. Master Mariner, Maritime University of Szczecin

14.30 Benedykt Hac Ph.D. Eng., Juliusz Gajewski, Lucjan Gajewski, Jarosław Nowak M.Sc., Kazimierz Szefler Ph.D., Maritime Institute in Gdańsk: Organization of marine geophysical investigations - BalticPipe project as a case study.

- 14.45 Wojciech Maleika Ph.D. Eng., Michal Palczyński Ph.D. Eng., West Pomeranian University of Technology in Szczecin: The influence of the beam width in multibeam echosouder on the accuracy of seabed models.
- 15.00 Associate Professor Adam Bolt Ph.D. Eng., Patrycja Jerzylo M.Sc., Gdansk University of Technology: Exploitation polymetalic nodules with deep seabed.
- 15.15 **Pawel Zalewski Ph.D. Eng.,** Maritime University of Szczecin: *Kalman Filter and Fuzzy Models in Dynamic Positioning Systems.*
- 15.30 Pawel Górtowski M.Sc. Chief Officer, Kinga Łazuga M.Sc., Maritime University of Szczecin: The influence of oil spill on effectiveness of the SAR action.
- 15.45 Marzena Górtowska M.Sc. Chief Officer, Maritime University of Szczecin: Aspects of the choice of places of refuge for ships in need of assistance on the Polish coast.
- 16.00 **Jerzy Marek Gutteter-Grudziński Ph.D. Eng.,**Maritime University of Szczecin: New ways of bilge waste water treatment on ships and oil platforms.
- 16.15 Discussion
- 16.30 Summary and close up the conference



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### AGH University of Science and Technology in Cracow The Maritime University of Szczecin

1<sup>st</sup> International Science and Technology Conference

# Marine mining as the resources opportunity for future generations

Schedule of Events

The conference under the auspices of the
European Parliament
and Deputy Prime Minister, Minister of
Economy,
Mr Waldemar Pawlak

Cracow, 7-8.12.2011.