



## INNOVATIONS AND NEW TENDENCY IN POLISH SYSTEM OF MARITIME EDUCATION

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**ABSTRACT:** This paper describes the maritime education, training and research in Poland based on an example of Faculty of Navigation in Gdynia Maritime Academy. The purpose of the paper is to present the integrated educational and training system of professional staff capable to meet the current demands for maritime specialists of any description from the part of the shipowners and shore-based companies of the sea economy in line with the requirements. The integration involves: curricula, research projects and the development of scientific staff on one hand a course of the sea going service as well as shore-based industrial experience of the marine professionals on the other hand. The paper contains the goals and aims of the system, the profile of a graduate of a Maritime Academy and the educational process effected through a multilevel structure of the system. The concluding part refers to the issues connected with the improvement of the current system, establishment of new lines of study, quality of the training process with regard to both the safety at the sea and the effectiveness of shipboard apprenticeship as each year, the world market demands more and better qualified professionals for ship operations, repairs and service.

### INTRODUCTION

The State Maritime College was established basing on the Government's edict of 17<sup>th</sup> of June 1920. A few days ago our Academy celebrated 80 anniversary. From 1968 having a status of Higher Maritime School is using official name Gdynia Maritime Academy (GMA). In our presentation we will touch briefly upon the present situation with regards to the maritime education and training in Poland specifically on Faculty of Navigation in Gdynia Maritime Academy.

Due to career developments and requirements in maritime industry, an integrated system meeting international standards has been established in Poland. This system may be considered as a

**Maritime Education and Training (MET)** and it consists of three different levels:

- ❖ **post secondary level**, i.e. a maritime college, educating future ratings; from 2000 Polish Maritime Administration gave permission to educate also officers on post secondary level;
- ❖ **university level**, corresponding to academic level and educating future **officers** with the degrees of B.Sc. and M.Sc.;
- ❖ **post university level**, fulfilling the vital role of vocational training for **all ranks of marine officers, including masters and chief officers**, carried out by the Officer Training Centre or other similar maritime institutions.

## GENERAL

Gdynia Maritime Academy is a state-owned school. It is a legal person and is supervised by the Minister of Transport and Maritime Economy within the provisions of a Parliamentary Act in this respect.

The aims and goals of the Academy are education and upbringing of highly qualified professionals and development of sciences for the purpose of maritime economy.


It offers a high quality education which will qualify students to become officers in the merchant fleet or take their places in respected positions in related industries or professions at an Engineer and M.Sc. degree levels.

The process of education at particular fields within the full-time, evening or part-time system is conducted in accordance with the plans and programmes of studies established by a respective council of faculty. The plans and programmes of studies follow the requirements of international conventions which merchant marine officers should satisfy, especially STCW, SOLAS, MARPOL and COLREGS conventions.

## STRUCTURE

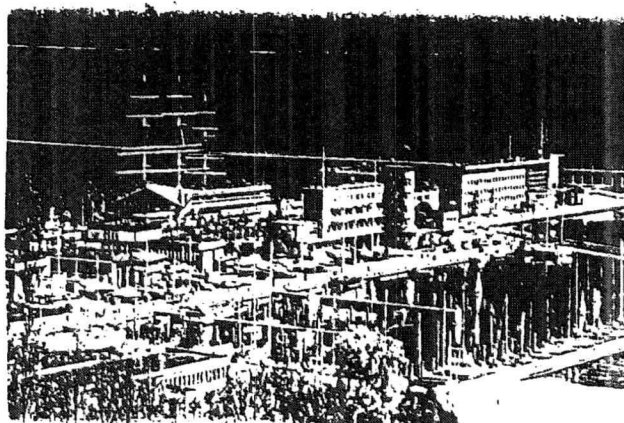
Gdynia Maritime Academy is the National Centre for training and education for the marine transport. It currently conducts studies at certificate, diploma and degree levels in the following sciences:

- Navigation and Marine Transport, Ship's and Port Operations,
- Marine Engineering (Power Plant Operation, Radio-electronics and Electroautomation),
- Marine Technology (Repair of Ship and Harbour Equipment),
- Management (Business, Sea Harbour Turnover, Hotel-Tourist Service),
- Commodities and cargo.

 **Gdynia Maritime Academy**

- 4 FACULTIES: navigation, marine engineering, electrical marine engineering, administration
- 13 MARINE SPECIALIZATIONS: sea transport, sea port operation, marine propulsion plant operation, repairing technologies of ship equipment and harbour facilities, industrial plant engineering, ship electroautomation, marine electronics, commodity and cargo expertise, hotel and tourism management, trade, management, organization of seaborne trade and port operations, logistics
- STAFF: 50 professors, 100 Ph.D., 160 M.Sc.
- STUDENTS: 5000 + 8500 officers and seaman's training
- SHIPS: sailing "Dar Młodzieży" training-research "Horyzont II"
- RESEARCH AREA: safety of navigation, marine search and rescue, carriage of cargo, automation, operational and engineering processes, optimization of power engineering processes, diagnostic, technical studies

INTERNATIONAL COOPERATION: 20 maritime academies and universities



## THE GRADUATED PROPERTIES

A graduate from Gdynia Maritime Academy is a highly educated and well prepared for work on board sea-going vessels, for companies of the maritime economy and also for maritime economy related companies located all over the sea side regions.

Gdynia Maritime Academy graduates:

- hold Diplomas with a title of B.Sc. and M.Sc.,
- acquired sea-going and land workshop experience and professional qualifications which jointly authorise them to obtain a Certificate of a Merchant Marine Officer issued by the Polish Maritime Administration,
- acquired professional experience and qualifications to undertake in the future employments at managerial positions in

the marine industry and sea side regional companies,

- hold a rank of a reserve midshipman after having completed military training within the frames of their studies.

## RESEARCH ACTIVITY

The Academy's staff is also involved in research projects within basic and applied areas of sciences. The main objects of research are:

- Safety of Navigation
- Search and Rescue
- Carriage of Cargoes
- Ship and Port Operations
- Automation of Navigational and Power Engineering Processes
- Optimisation of Power Engineering Processes
- Diagnosing Ship's Technical Systems
- Foodstuff Technology.

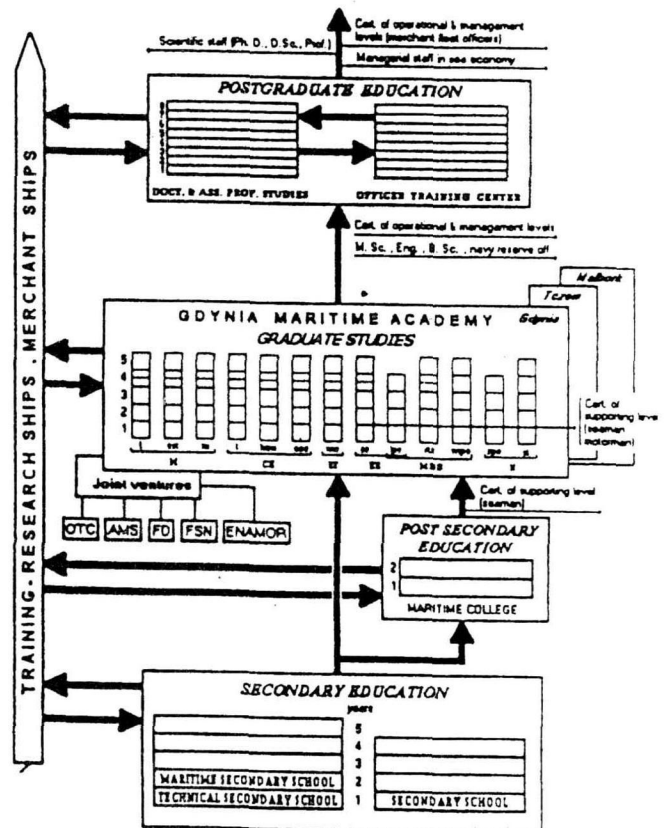
Members of the Academy's staff are highly appreciated specialists who participate in the development of practical projects, which then are implemented in maritime economy. Some of them are also employed in the Polish Academy of Sciences, and an essential group are experts working for IMO – International Maritime Organisation.

## MARITIME EDUCATION SYSTEM

Maritime academies in Poland, apart from conducting their own curricula, have also assumed the role of co-ordinators in charge of the development and effectiveness of the integrated system of staff education for the sea economy under the authority of the Ministry of Transport and Sea Economy (MTSE) at the following four levels:

- Secondary Maritime Education, supervised by MTSE, covering:
  - basic maritime education;

- apprenticeship on board training ships, and supply of candidates to maritime academies which educate the teaching staff for these schools. Moreover, the Maritime Post Secondary Schools are established in response to the needs of the labour market. These schools are both private and state run and offer two-years education courses.
- Graduate Studies:
  - one-level or two-level, full-time, free of charge studies in Gdynia;
  - two-levels, part-time, payable studies in Gdynia, Tczew and Malbork.
- Postgraduate studies:
  - shipboard officers, operational and management levels;
  - managerial staff for shore;
  - based operations.
- Doctorate and Assistant Professor Studies which lead to the degree of a doctor (PhD), an assistant professor (DSc) and a professor.





## QUALITY OF EDUCATION

Both : Faculty of Navigation and Faculty of Marine Engineering of Gdynia Maritime Academy being the very first faculties in Polish Academic Education System have

achieve the ISO 9001 Quality Standards in Education in July 1998 after two years of preparation. GMA was granted ISO 9001 by Polish Register of Shipping member of IACS.

# *Polski Rejestr Statków*



## **CERTYFIKAT SYSTEMU JAKOŚCI**

**CERTIFICATE OF QUALITY SYSTEM**

**Nr NC-087/98**



**PCBC**

Akredytacja PCBC  
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Zakres certyfikacji: **KSZTAŁCENIE NA POZIOMIE AKADEMICKIM,  
PROWADZENIE PRAC NAUKOWO- BADAWCZYCH  
ORAZ SZKOLENIE ZAWODOWE SPECJALISTÓW DLA  
GOSPODARKI MORSKIEJ WG WYMAGAŃ POLSKICH  
I MIĘDZYNARODOWYCH.**

Scope of certification: **EDUCATION ON ACADEMIC LEVEL, RESEARCH WORK, AS WELL  
AS PROFESSIONAL TRAINING OF SPECIALISTS FOR THE MARITIME  
ECONOMY ACCORDING TO THE POLISH AND INTERNATIONAL  
REQUIREMENTS.**

Audit przeprowadzony przez Polski Rejestr Statków dostarczył dowodu, że stosowany w przedsiębiorstwie system zarządzania jakością jest zgodny z normą;  
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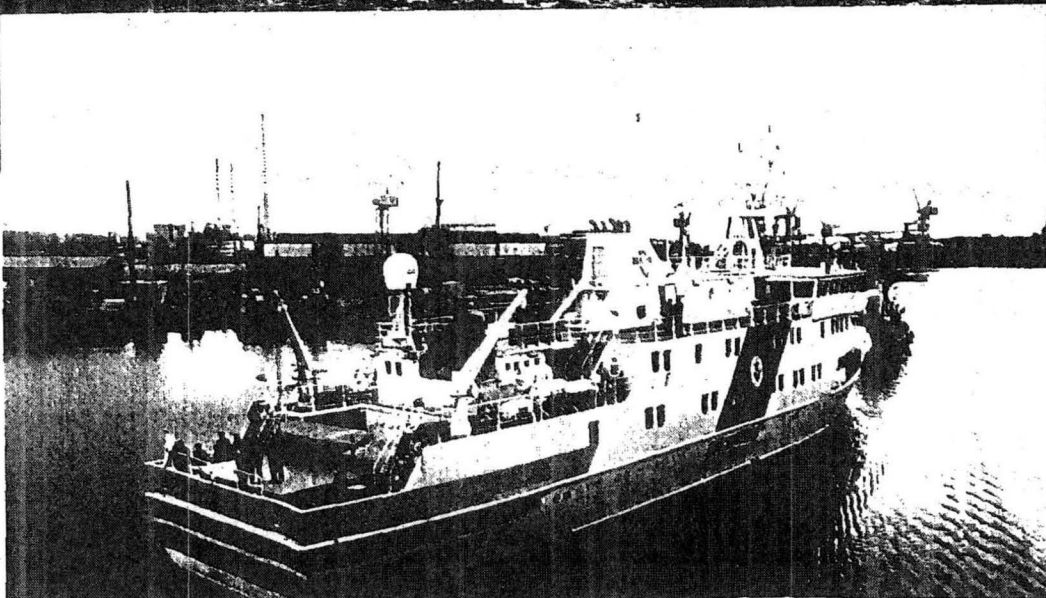
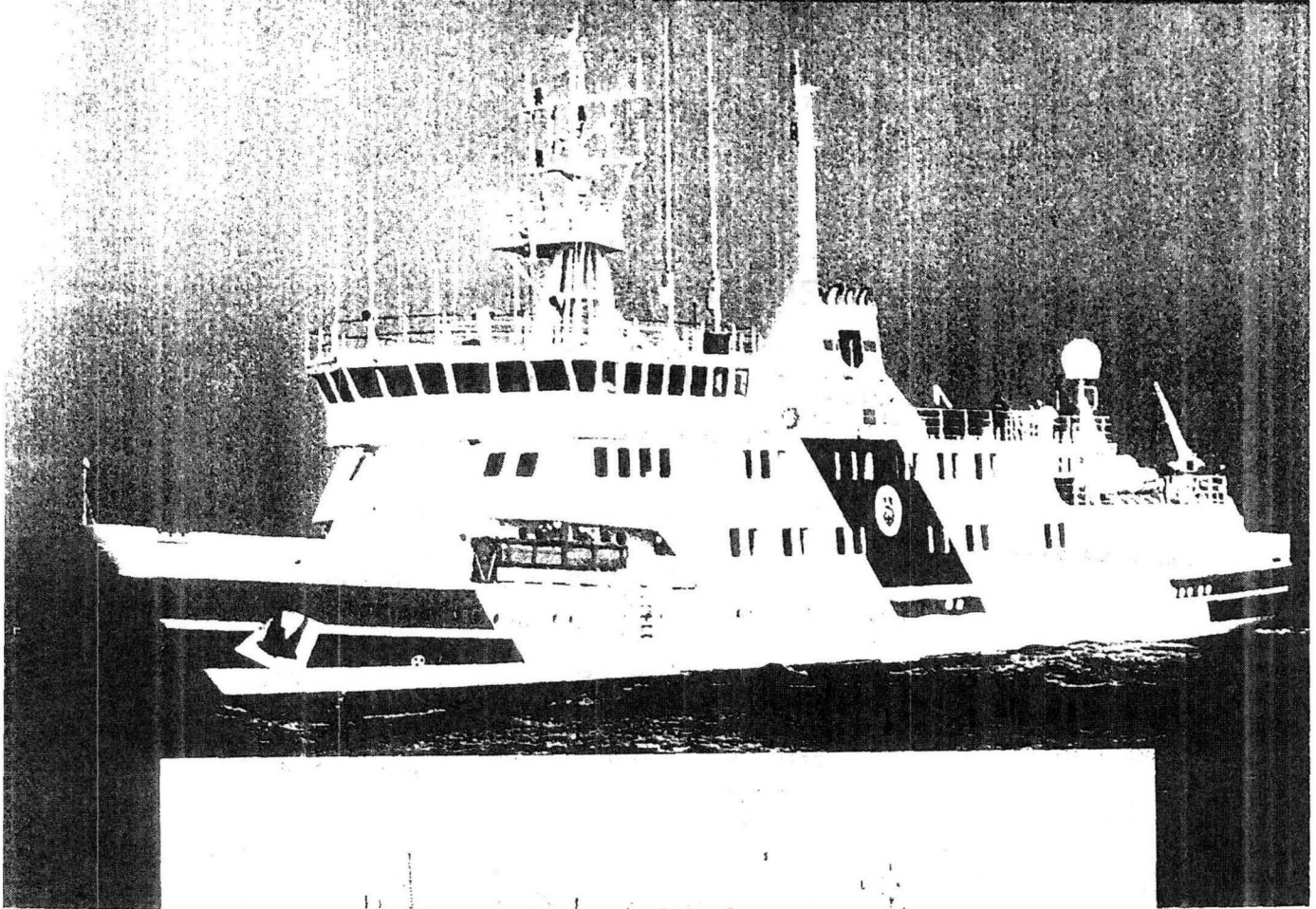
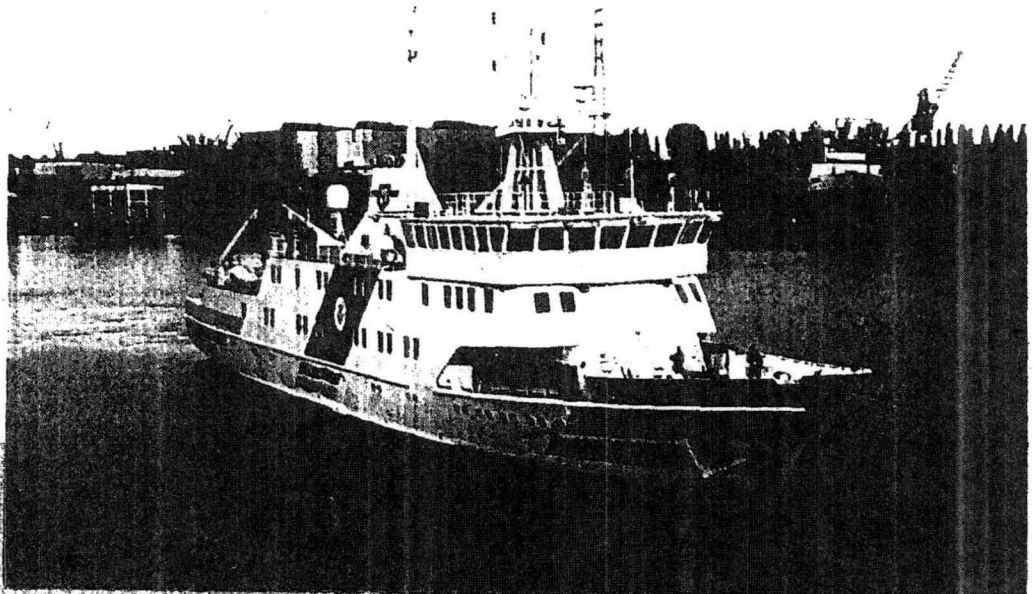
  
Bogdan Przybylski

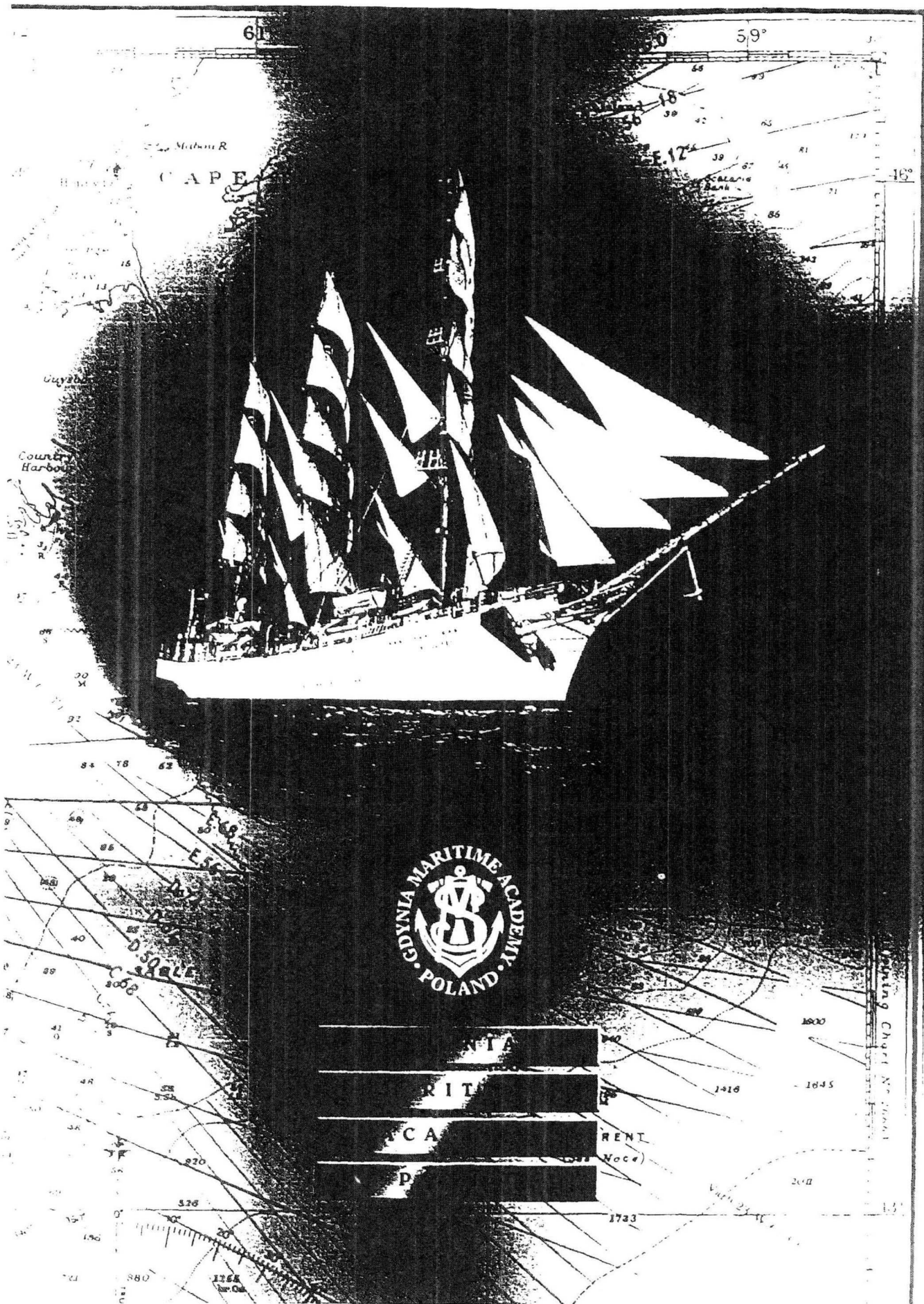
  
Jan Jankowski

Gdańsk, 08.07.1998

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Session I A – Working Group 1



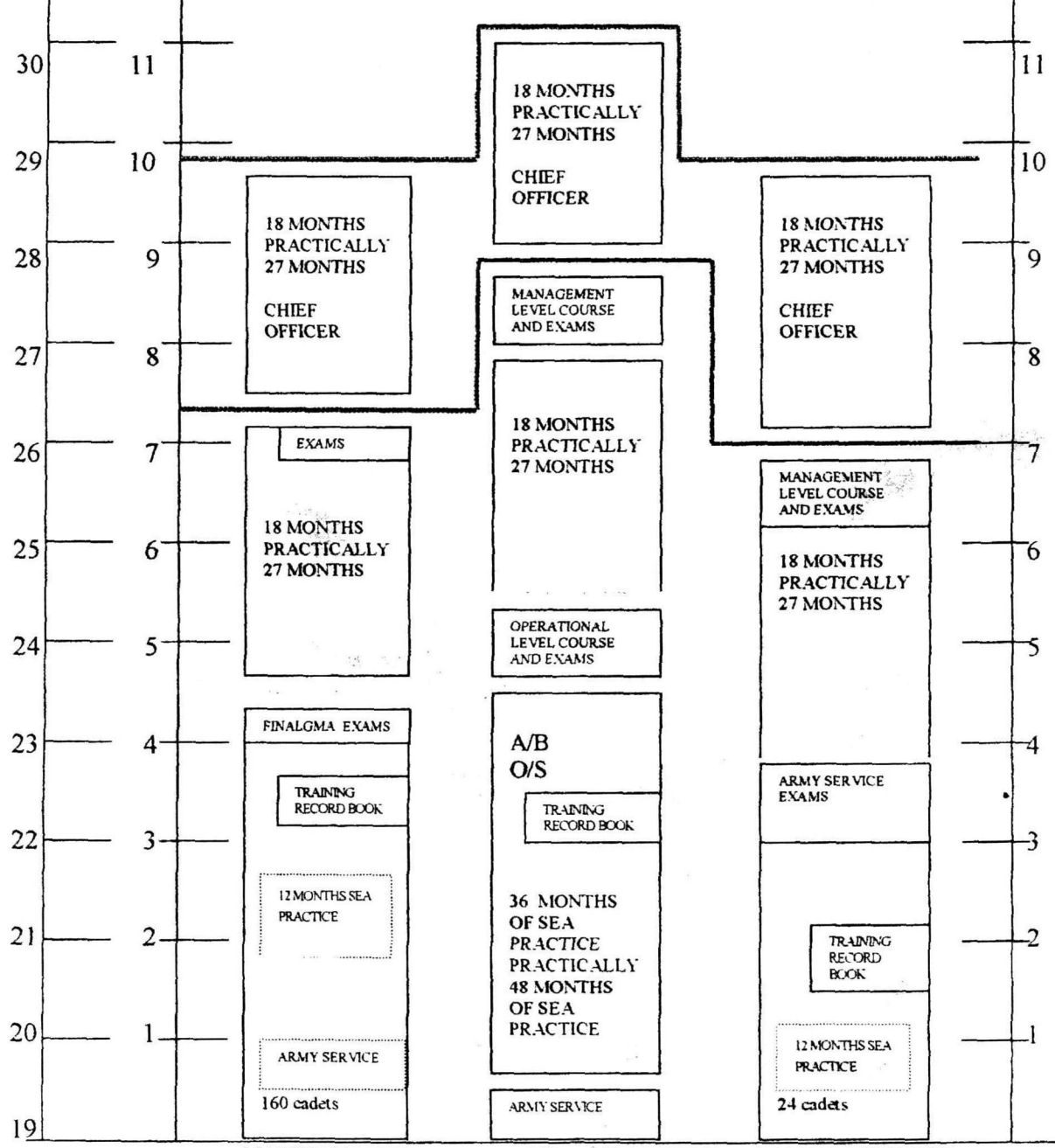


AGE YEARS

MASTER MARINER LICENCE

CHIEF OFFICER LICENCE YEARS

DECK OFFICER LICENCE



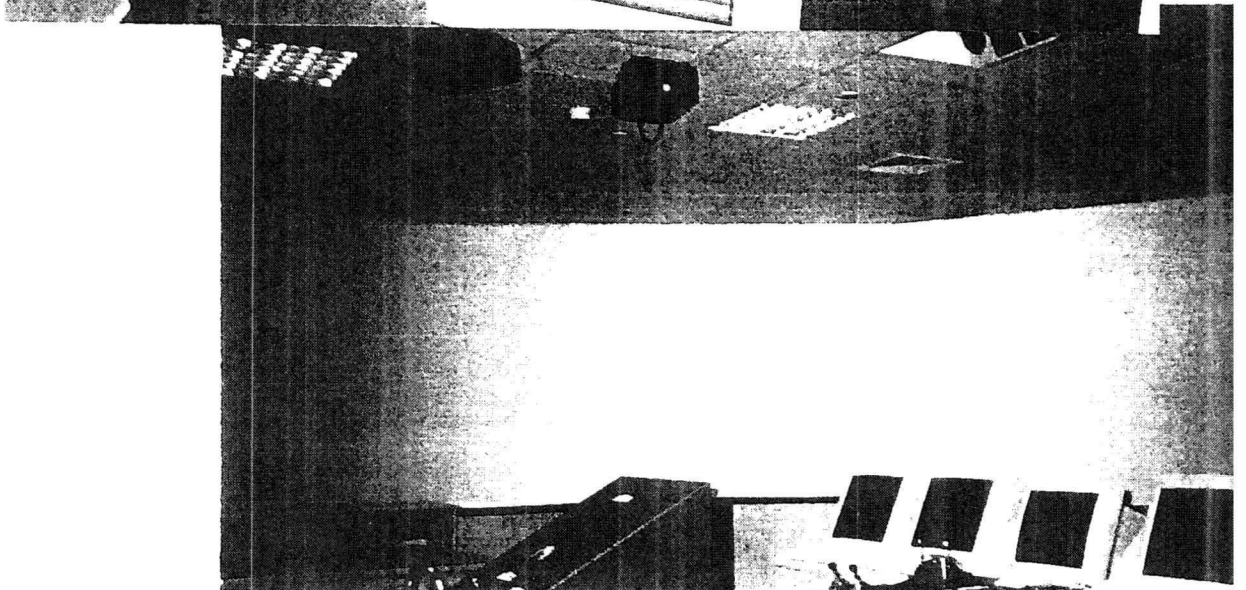
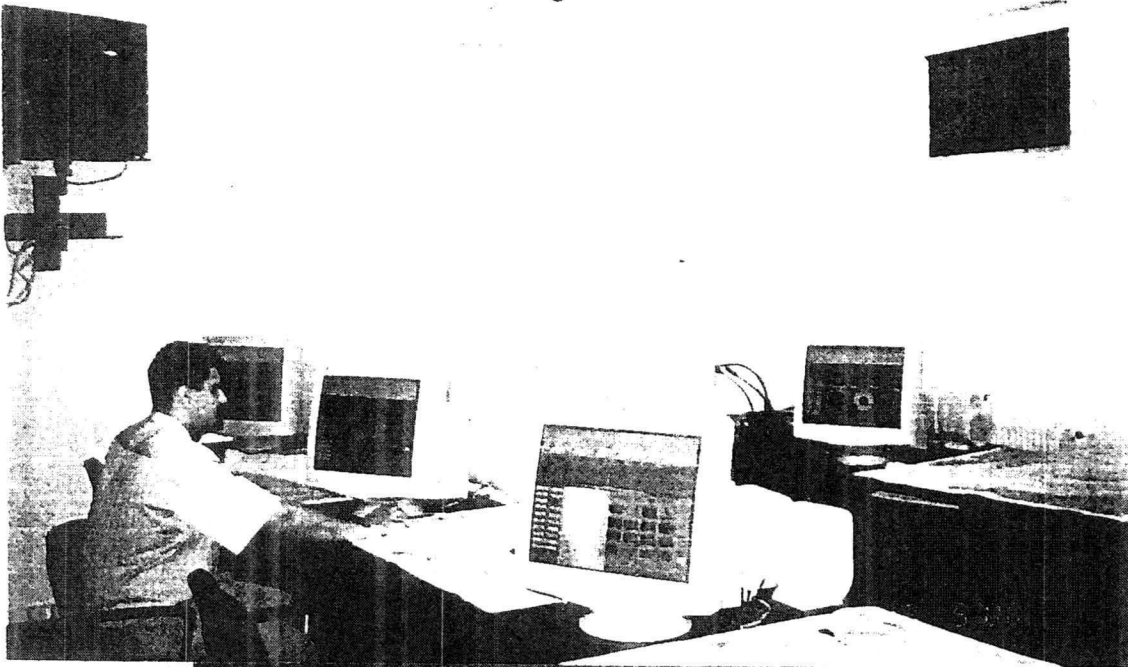
YEARLY CAPACITY

160

100

40





## TEACHING FACILITIES

The teaching facilities at Gdynia Maritime Academy including :

- Radar Simulator
- ARPA Simulator
- 240° scope Ship handling Simulator
- Cargo handling Simulator
- 2 GMDSS Simulators
- Electronic Chart ECDIS Simulator
- Survival Training Facilities
- Fire Fighting Training Facilities
- Marine Pollution Prevention Training Facilities
- Marine Power Plant Simulator
- LPG / LNG loading control Simulator
- Refrigerated Container Laboratory
- Engineering Workshop
- Diesel Power Plant / Workshop

and more than 60 well equipped laboratories.

Three presented transparent foils shows :

- 240° scope Ship handling Simulator
- Cargo handling Simulator
- Electronic Chart ECDIS Simulator

According to requirements specified in the International Convention on STCW concerning examination methods, GMA having all above mentioned simulators is intending to establish special examination centre for Maritime Administrations.

## FINAL CONCLUSION

The high technical complexity of ship equipment demands well-educated officers, and it is foreseen that the qualification requirements for ship crewmembers will continue to increase in the coming years. At the same time, the world shipping market experts are forecasting a lack of well-educated merchant marine officers in terms of the requirements agreed upon in the conventions and protocols developed by the IMO.

Due to different level of knowledge of young officers is necessary to establish the uniform system for the certification of competency applicable internationally to the graduates of the IAMU Member Maritime Universities / Faculties through academic approach.

Gdynia Maritime Academy is very interested in promoting Global Maritime excellence and in eliminating of insufficient ways of educating and simplified training.

## REFERENCES

1. Lisowski, J., The integrated engineering education and research system in Poland for the sea economy and shipping industry. Proc. 2nd Asia – Pacific Forum on Engineering & Technology Education Sydney, Australia, 4-7 July 1999;
2. Mindykowski, J., Maritime education and training in Poland. Proc. 6<sup>th</sup> Meeting of the European Commissions Concerned Action on Maritime Education and training.