

Brief C.V. of Prof. Dr. M. A. Shama
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1. Current Job & Affiliation:

**Emeritus Prof. of Naval Architecture and Shipbuilding
 Faculty of Engineering, Alexandria University, Egypt**

2. Education, Qualification and Features of Merit

- B.Sc. Honors (1960) Faculty of Engineering, Alexandria University, Egypt
- Ph.D (1965) Department of Naval Architecture, Glasgow University, U.K.
- Dean of Faculty of Engineering, Alexandria University (1995-1998)
- Head, Naval Architecture and Marine Engineering Dept. (1988-1992)
- Marine Engineering Prize of M.H. Amer (1960)
- Patent of Frame Bending Machine, Glasgow University, Scotland, UK (1965)
- State Prize for Engineering, Egypt, (1974)
- Science & Arts Medal of First Grade, Egypt, (1974)
- Member of the Encyclopedia of Distinguished Personalities in Egypt
- Member of the Honorary Editorial Advisory Board (HEAB), Encyclopedia of Life Support Systems, EOLSS, Jan. (1995- 1996)
- Member of the Supreme Egyptian State Comm. for the Promotion of Professors, 1982- 2002
- Chairman of the Supreme Egyptian State Comm. for the Promotion of Prof., (1998 – 2002)
- External examiner for Ph.D. Degrees (Thesis), Maryland University, April 1998- April 2000
- Nominated by Alexandria University for the Egyptian State Prize of Recognition.
- Head of the International Committee for the Investigation of the Causes of Sinking of the RO RO Passenger Ferry AISalam Boccaccio 98, 2006

3. Membership of Scientific & Technical Societies

- Member of the RINA from 1963-1982
- Board Member of the Egyptian Society of Mar. Eng. and Shipbuilders since November 1981.
- Member of Organizing Committee of IMAM 1981.
- Correspondent to ISSC for Egypt (1982-2004)
- Council member of the Egyptian Navigation Co, 1992-1993
- Honorary Member of (EOLSS) Encyclopedia of Life Support Systems, 1995-1996
- Member of the State Committee for the Promotion of Professors, 1982- 1998
- Member of the Faculty of Engineering Council, 1988-1995
- Chairman of the Faculty of Engineering Council 1995-1998
- Member of Alexandria University council, 1995-1998
- Chairman of Arab Network of Staff Development of Arab Universities, ANSD, 1995-1998
- Chairman of the Engineering Centre for Community Development, Faculty of Eng., 1995-1998
- Head of the Supreme State Committee for the Promotion of Prof. for Marine Eng. and Textiles, 1998
- Member of Board of Directors, Port Said Container Co., 1999 – 2000
- Member of the General Assembly of the Egyptian Maritime Holding Co. since 1999
- Member of Council of Alexandria High Institute of Technology, since 2000
- Member of the General Assembly of Alexandria Shipyard since 2001
- Member of Board of Directors, Misr Shipping Co., 2001 – 2003
- Member of Board of Directors, National Shipping Co. 2003-2005

4. Professional Experience and Consultations

- Research surveyor, Lloyds Register of Shipping, London, U.K. 1969-1971
- Technical Specifications of Tug Boats and Salvage Tugs for Alexandria Port Authority - 1974
- Member of Alexandria University, Faculty of Engineering Committee for studying the Conversion of Some of the Egyptian General Cargo Fleet to Container Ships - 1974 - 1975
- Member of the Egyptian Academy for Scientific Research Committee for offshore technology - 1974
- Consultant to the Arab Maritime Academy, Research and Consultation Center, Alexandria - 1975
- Participating in the establishment of Marine Eng. section- Basra University, Iraq 1976-1979
- Preparing stability booklet for a High Seas Fishing Vessel and general cargo ships 1974 - 1980
- Technical consultant to several mar. companies in Egypt, Alex. Port Auth., Holding Co. of Mar. Transport, Assuit Gov., several companies for Transport & Tourism, the National Bank of Egypt.

- Principal investigator of EIA of Abu-Quir Fertilizers Co. 1995-1998
- Participating in the study of converting a RO-RO ship to a Passenger ship. 1995
- Preparation of stability booklet and conducting lightweight checks for several ships types.
- Conducting Technical Investigations of Marine accidents and casualties for legal court cases.
- Conducting comprehensive studies and calculations on Research and Training Fishing Vessels
- Conducting Technical and Economic studies of Coastal Fishing Vessels.
- Studying GHG Emissions and energy conservation for the Transport Sector in Egypt.1994-1995
- Preparing specifications and supervising tests, trials and delivery of tugboats, bulk carriers, HSC Catamarans, etc.

5. Research Activities, Attending of International Conferences as a Speaker or Referee

Attended, Contributed, Chaired and Participated in the Following Conferences:

- The Royal Institute of Naval Architects -London,, "A Design Study of a Numerically Controlled Frame Bending Machine".1965
- AMTA, "The Use of Scientific Methods for Solving the Problems of the Mar. Sector", Alexandria, 1974.
- PRADS -, Tokyo, Japan: 1977: "The Cost of Irrationality in Ship Structural Design". + "Flexural Warping Stresses of Asymmetrical Sections".
- Visiting Professor, Glasgow University (3 months) SRC Grant, 1979.
- ISSC 79, Paris, 1979
- IMAEM - 1981, Trieste, Italy, "Safety Assurance: Methods of Assess. for Ship Structures". 1977
- International Shipbuilding Conference - Rostock, University, Germany, 1981.
- The Egyptian Soc. of Marine Engineering and Shipbuilders, Fourth Con. of (Offshore Industry), "A General Outlook of Offshore Technology" Alexandria, 1983
- The Egyptian Society of Marine Engineers and Shipbuilders, Seventh Conference (Offshore Engineering and Technology):"The Economics of Safety Assurance., Alexandria, Egypt, 1984.
- Visiting Professor, Departments of Naval Architecture, U.K. Universities, 1984.
- ISSC 85 - Italy 1985.
- Visiting Professor, Dept. of Naval Architecture, Marine Techn.and Ship Science, UK, 1990.
- Intern. Conf. on "Marine Fisheries, Management and Develop." November, Alex., Egypt, 1991.
- Intern. Conf. on "Eng. Res., Develop. & Applications", ERDA 91, Nov., Port- Said, Egypt, 1991.
- Visiting Prof., U.S.A. Universities, Departments of Naval Architecture and Marine Engineering, the Fulbright Commission and the USIA, December, USA, 1991.
- Intern. Conference on "Environmental Protection is a Must", February, Alexandria, Egypt, 1992.
- Conference on "Ship Safety" Soc. of Mar. Eng. Shipbuilders, May, Alexandria, Egypt, 1992
- International Conference on ISUMA 93, April, Maryland, USA, 1993.
- 3rd World Congress on Engineering Education and Training, Nov., Cairo, Egypt, 1994
- Workshop on EIA December, Aberdeen, Scotland, UK., 1994
- Regional Workshop On New Approaches To Engineering Education, April, Al-Ain, UAE, 1995
- Fourth World Conf. On Engineering Education,"Towards the Develop. Of Eng. Education To Comply With Society Requirements" USA, Oct. 1995
- Workshop on Introducing Environmental Topics In Engineering Education, AUC, Jan., 1996
- HEAB, Honorary Editorial Advisory Board, EOLSS ENCycloPEDIA OF LLIFE SUPPORT SYSTEMS, Jan., (USA-1996)
- Chairman of the International Conference RETBE 96 (Role of Engineering Towards Better Environment), Alexandria, Dec. 1996
- Second Regional Conference, "Corrosion Problems in Oil Industries", Kuwait, 1996
- Visiting Prof, Dept. of Planning, Oxford Brookes University, March, 1997
- Workshop on "Implementation of Energy and Environmental Topics in the Various Engineering Curricula", Faculty of Engineering, Alexandria University, March, 1997
- Workshop on "Environmental Changes", Faculty of Engineering in Cooperation with Energy Planning Authority, 30 April, 1997
- International Conference RETBE 98, Alexandria, 1998
- International Conference RETBE 2000, Alexandria, 2000
- International Conference PRADS 2001, China, 2001
- International Conference IMAM 2005, Portugal, 2005
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6. Fields of Interest, Contributed Topics & Supervised Research Degrees

Published 82 papers over the period from 1965 to 2004 in the fields of Ship Stability, Marine Casualties, Ship Safety, Structural Design of Ships, Ship Design for Environment, Impact of Corrosion on Ship Strength, Improving Exploitation of Fishing Resources in Egypt, Design and Economics of Fishing vessels, Environmental Protection and Energy Conservation in the Maritime field, Environmental Impacts of Transport Systems, Introducing Energy and Environment in Engineering Education.

7. Publications (Prof. Dr. M. Shama)

Papers on Ship Design and Economics

1. Shama, M. A., "Structural and Economical Consequences of Ship Deflection", Seminar on the Application of Science & Technology in Marine Transport, A.M.T.A., Res. and Consultation Centre, July **(Egypt-1974)**.
2. Shama, M. A., "Optimizing Hull Steel Weight for Overall Economic Transportation", Marine Week, May 2, **(UK-1975)**.
3. Shama, M. A., "The Cost of Irrationality in Ship Structural Design", PRADS. Int. Conference on Practical Design in Shipbuilding, SNAJ, Tokyo Oct. **(Japan-1977)**.
4. Shama, M. A., "Computer Design of Ship", Bull., College of Eng., Basra Univ. **(Iraq-1977)**.
5. Shama, M. A., "Economical Consequences of Irrational Structural Design of Ships", Bull. Of Collage of Eng., Basra University,, Vol.2, No.1, March, **(Iraq-1977)**
6. Shama, M. A., "On the Rationalization of ship Structural Design", Schiff und Hafen, March, **(Germany-1979)**.
7. Shama, M. A., "ON the Economics of Safety Assurance" Dept. of Naval Architecture and Ocean Engineering Glasgow University, **(UK-1979)**.
8. Shama, M. A., and Omar, A. F. "Principal Dimensions of Bulk Carriers Based on a Set of Dimensional Constraints", Canadian Maritime Industry Assoc. (CMIA), ANN. Tech. Conference CSOE 88, February, **(Canada-1988)**.
9. Shama, M. A., and Omar, A. F. "Rationalization of Longitudinal Material of Bulk carriers", Techno-Ocean' 88 International Symposium, **(Japan-1988)**.
10. Shama, M. A., "Factors Affecting Coastal Fishing Vessel Prod", AEJ, April, **(Egypt-1988)**.
11. Shama, M. A., "Factors Aff. Fishing Voyage Expenses and Efficiency", AEJ, April, **(Egypt-1988)**.
12. Shama, M. A., "Operational Cost Analysis of Coastal Fishing Vessel", AEJ, July, **(Egypt-1988)**.
13. Shama, M. A., "An Economic Evaluation Model for the Egyptian Coastal Fishing Vessel", AEJ, July, **(Egypt-1989)**.
14. Shama, M. A., "Investment Decisions on Coastal Long Liners", AEJ, October, **(Egypt-1989)**.
15. Shama, M. A., Eliraki, A. M., and Atwa, K. I. "A Rational approach to the Determination of Principal Dimensions of Coastal Trawlers", AEJ, Jan., **(Egypt-1993)**.
16. Shama, M. A., Eliraki, A. M., and Atwa, K. I. "A Computer Based design Model for Coastal Stern Trawlers", AEJ, Jan., **(Egypt-1993)**.
17. Shama, M. A., "Appraisal of Fishing Vessel Economics Using Risk Analysis", ISUMA93, April. **(USA-1993)**.
18. Shama, M. A., "An Integrated Rational App. For Improving the Economics of Coastal Stern Trawlers", AEJ, April, **(Egypt-1994)**.
19. Shama, M. A., Eliraki, A. M. Leheta, H. W. and Hafez, K. A., "CADSUCS, the Creative CASD for the Concept Design of Container Ships", AEJ, Dec., **(Egypt-1995)**.
20. Shama, M. A., Eliraki, A. M. Leheta, H. W. and Hafez, K. A., "On the CASD of Container Ship; State of the Art", AEJ, Dec., **(Egypt-1995)**.
21. Shama, M. A., Moniem, A. F. A. and Eweda, S., "Assessment of Uncertainties of the Sea Margin", Maritime Research Journal, Sept., **(Egypt-1998)**.

Papers on Ship Safety

22. Shama, M. A., "Safety Assurance: Methods of Assessment for Ship Structures", IMAEM, Second Conference, Trieste, September, **(Italy-1981)**.
23. Shama, M. A., "Safety Requirements for Nile Tourist Vessels", Seminar on Future of Nile Tourism in Egypt, (In Arabic), Alex., Eng. Journal, Vol.28, No.2, April **(Egypt-1989)**.
24. Shama, M. A., "Marine Structural Safety and Economy", SNAME, Symposium, Marine Structural Inspection, Maintenance, and Monitoring, March, **(USA-1991)**.
25. Shama, M. A., El- Gammal, M. Elsherbeini "Application of Reliability Assessment to Welded Tubular Joints", AEJ, Oct., **(Egypt-1992)**.
26. Shama, M. A., El- Gammal, M. Elsherbeini "Estimation of Fatigue life of Welded Tubular

Connections Containing Defects”, AEJ, No. 4, Oct., (**Egypt-1992**).

Papers on Ship Structure Analysis and Design

27. Shama, M. A., “ Effect of Variation of Ship Section Parameters on Shear Flow Distribution, Maximum Shear Stresses and Shear Carrying Capacity Due to Longitudinal Vertical Shear Forces”, European Shipbuilding, Vol. 18. , (**Norway-1969**).
28. Shama, M. A., “Effect of Ship Section Scantlings and Trans. Position of Long. Bulkheads on Shear Stress Distribution and Shear Carrying Capacity of Main Hull Girder”, Int. Shipbuilding Progress, Vol. 16, No. 184. , (**Holland-1969**).
29. Shama, M. A., “On the Optimization of Shear Carrying Material of Large Tankers”, SNAME, J.S.R, March, (**USA-1971**).
30. Shama, M. A., " An Investigation Into Ship Hull Girder Deflection" Bull. of the Faculty of Engineering, Alexandria University, Vol. XII, (**Egypt-1972**)
31. Shama, M. A., “Effective breadth of Face Plates for Fabricated Sections”, Shipping World & Shipbuilders, August (**UK-1972**).
32. Shama, M. A., " Calculation of Sectorial Properties, Shear Centre and Warping Constant of Open Sections", Bull., Of the Faculty of Engineering, Alexandria University, Vol. XIII, (**Egypt-1974**)
33. Shama, M. A., "A simplified Procedure for Calculating Torsion Stresses in Container Ships", Research and Consultation Centre, AMTA, (**Egypt-1975**)
34. Shama, M. A., “Structural Capability of Bulk Carriers under Shear Loading”, Ship Symposium, Rostock Univ., Sept. (**Germany-1975**).
35. Shama, M. A., “Shear Stresses in Bulk Carriers Due to Shear Loading”, J.S.R., SNAME, Sept. (**USA-1975**).
36. Shama, M. A., “Analysis of Shear Stresses in Bulk Carriers”, Computers and Structures, Vol.6, (**USA-1976**).
37. Shama, M. A., “Stress Analysis and Design of Fabricated Asymmetrical” Sections Schiffstechnik, Sept., (**Germany-1976**).
38. Shama, M. A., “Flexural Warping Stresses in Asymmetrical Sections” PRADS77, International Conference on Practical Design in Shipbuilding SNAJ. Tokyo, Oct. (**Japan-1977**).
39. Shama, M. A. and Abdel-Nasser, Y., "Ultimate Strength and Load carrying Capacity of a Telescopic Crane Boom", AEJ, Vol.41, (**Egypt-2002**)

Papers on Ship Stability

40. Shama, M. A., “A Method for Calculating Ship Stability Curves”, Shipbuilding and Shipping Record, Aug., (**UK-1968**).
41. Shama, M. A., “A Computer Program for Ship Stability Curves”, Shipbuilding and Shipping Record, May, (**UK-1969**).
42. Shama, M. A., “The Risk of Losing Stability”, Shipping World and Ship, Oct. (**UK-1975**).
43. Shama, M. A., “On the Probability of Ship Capsizing”, Schiff und Hafen, Sept. (**Germany-1976**)
44. Shama, M. A., “Ship Stability Assessment, Criteria & Risk”, AEJ, July, (**Egypt-1993**).
45. Shama, M. A., and other “Intact Stability of SWATH Ship”, AEJ, Vol. 40, (**Egypt-2001**).

Papers on Energy and Environmental Protection

46. Shama, M. A., and several authors,“ Costs of C02 Abatement in Egypt Using Both Bottom- Up and Top- Down Approaches”, Energy Policy, (**USA-1994**).
47. Shama, M. A., and several authors,“ Estimation of GHG Emissions In Egypt Up to the year 2020”, World Resource Review, Vol. 6, No. 8 (**USA-1994**).
48. Shama, M. A., and Hassan, A, “Technical Evaluation of Transport- Related GHG Abatement Techniques”, AEJ, April, (**Egypt-1995**).
49. Shama, M. A., “Ship Casualties Types. Causes and Env. Impacts”, AEJ, April, (**Egypt-1995**).
50. Shama, M. A., Lehata, H. W. and Mahfouz, A. B. “ Shear Strength of Damaged Coastal Oil Tankers under Vertical Shear Loading”, AEJ, April, (**Egypt-1995**).
51. Shama, M. A., “Ship Structural Failures: Types Causes and Environmental Impact”, AEJ, July, (**Egypt-1995**)
52. Shama, M. A., with several authors “Energy Conservation as a Tool for Greenhouse Gases Abatement”, Conference on Technology for Energy Efficiency and Environmental Protection, Cairo, March, (**Egypt-1995**).
53. Shama, M. A., with several authors, "GHG Emissions Inventory for Egypt and Emission Mitigation Options", VTT, Energy, (**Filand-1995**)
54. Shama, M. A., “Impact on Ship Strength of Structural Degradation Due to Corrosion”, AEJ, July, (**Egypt-1995**).
55. Shama, M. A., Leheta, H. W. and Mahfouz, A. B., “ Shear Strength of Damaged Seagoing Oil Tanker

- Under Vertical Shear Loading”, Jan, Dec., **(Egypt-1996)**.
56. Shama, M. A., “Impact on Ship Strength of Structural Degradation Due to Corrosion”, Second Arabian Corrosion Conference, **(Kuwait-1996)**.
57. Shama, M. A., “Energy and Environment in Engineering Education”, AEJ, Vol.36, **(Egypt-1997)**.
58. Shama, M. A., “Impact on Main Environment of Ship Structural Failures and Casualties”, AEJ, Jan., **(Egypt-1997)**.
59. Shama, M. A., “Implementation of Energy and Environment Topics in Engineering Curricula”, Workshop, Faculty of Engineering, Alexandria University, **(Egypt-1997)**.
60. Shama, M. A., “Risk Management”, AEJ, Vol. 37, No.2, March., **(Egypt-1998)**.
61. Shama, M. A., “Life Cycle Assessment of Ships”, UNESCO Workshop on LCA, Alex, **(Egypt-1995)**.
62. Shama, M. A., “Energy and Environment in Ship Manufacturing Processes”, 8th Int. Symposium on Practical Design of Ships and other Floating Structures, PRAD’s 2001, Sept., **(China-2001)**.
63. Shama, M. A. and others, “Reliability of Double Hull Tanker Plates Subjected to Different Loads With Corrosion Effects”, AEJ, **(Egypt-2002)**.
64. Shama, M. A. and others, “Impact of Recoating and Renewal on the Reliability of Corroded Hull Plating of Double Hull Tankers”, AEJ, **(Egypt-2002)**.
65. Shama, M.A., “Life Cycle Assessment of Ships”, Alexandria Eng. Journal (AEJ), **(Egypt-2004)**.
66. Shama, M.A., “Life Cycle Assessment of Ships”, IMAM 2005 **(Portugal-2005)**

Papers on Shipbuilding and Ship Repair

67. Shama, M. A. and Miller, N. S., “A Design Study of a Numerically Controlled Frame Bending Machine”, RINA, **(UK-1965)**.
68. Shama, M. A. “Plastic Bending of Short Mild Steel Beams”, Bull of the Faculty of Engineering, Alexandria University, **(Egypt-1965)**.
69. Shama, M. A., “Behaviour of Short Mild Steel Beams Bent into the Plastic Range of the Material” Bull of the Faculty of Engineering, Alexandria University, **(Egypt-1967)**.
70. Shama, M. A., “The Impact of Application of a Numerically Controlled Plate Forming Machine on Shipyard Production” Bull of the Faculty of Engineering, Alexandria University, **(Egypt-1968)**.
71. Shama, M. A., “Numerical Control of Plate Forming and Associated Problems”, Shipbuilding and Shipping Record, Jan., **(UK-1970)**
72. Shama, M. A., “On the Calculation of Cold Forming Residual Stresses”, Bull., Of the Faculty of Engineering, Alexandria University, Vol. XI, **(Egypt-1970)**
73. Shama, M. A., “Cold Forming Residual Stresses and Their Effect on the Accuracy of Post – Forming Operations”, European Shipbuilding, No.2, and No. 3, Vol. 19. , **(Norway-1970)**.
74. Shama, M. A., “On the Calculation of Cold Forming Residual Stresses”, Schiff und Hafen, **(Germany-1974)**.
75. Shama, M. A., “Demand for Improving Shipbuilding and Ship Repair Industries in Egypt”, in Arabic, Egyptian Maritime Society, Sept., **(Egypt-1997)**.

Papers on Offshore Technology

76. Shama, M. A., “A General Outlook to Offshore Technology”, Forth seminar, the Egyptian Society of Marine Engineers and shipbuilders, Alexandria, April, **(Egypt-1983)**.
77. Sharaki, M., Shama, M. A., and Elwani. M., “Wave Forces on Space Frame Structure”, AEJ, April, **(Egypt-1992)**
78. Sharaki, M., Shama, M. A., and Elwani. M. H. “Response of Space Frame Structures Due to Wave Forces”, AEJ, Oct., **(Egypt-1992)**.

Papers on Engineering Education

79. Shama, M. A., “A Projection on the Future Demands and Cap. Of Offshore Technology” A.M.R.J., **(Egypt-1976)**.
80. Shama, M. A., and D. H. Gerbo, “The Future of Marine Engineering Education in Iraq,” in Arabic, Almuhandis, Journal of the Iraqi Society of Engineers, No.67 **(Iraq-1978)**
81. Shama, M. A., Kherallah, H. N. and Rashed, O. F., “Towards the Development of Engineering Education to Comply with Society Requirements”, 3rd world Congress on Engineering Education and Training, Cairo, November, **(Egypt-1994)**.
82. Shama, M. A., Kherallah, H. N. and Rashed, O. F. “The Rote of Staff Development in the promotion of Engineering Education”, Regional Workshop on New Approaches to Engineering Education, April, **(UAE-1995)**.
83. Shama, M. A., Kherallah, H. N. and Rashed, O. F. “Towards the Development of Engineering Education to Comply with Society Requirements”, Fourth World Conference on Eng. Education, Oct., **(USA-1995)**.