

Update at 10. Jan. 2019

EMC ENGINEERING RECORDS

OF THE KOREA TECHNOLOGY INSTITUTE

Engineering boundaries of the KTI;

- EMC counter measuring against malfunctions on the processor controlled equipments.
- EMC engineering for the automatic manufacturing plant.
- EMC engineering for next generation nuclear power plant.
- Analysis and design for the Grounding and bonding system.
- EMC design and test for MIL-STD 461F.
- Analysis and design of the HEMP shelter, networks and communications
- EMC design and test for submarine, satellite, rocket and missile.
- EMC design and review for rolling stock, subway station, power control system, chemical plant and hospital facilities.
- Special military EMC filter design and EMC counter measurements.
- Test and analysis for human hazard from radio energy
- Analysis and optimal design on the shared site/radio propagation and antenna allocation.
- EMC design and review for the semiconductor mass production line.
- EMC design and counter measuring for larger refinery factories.
- RF system design & propagation analysis.
- EMC & RF engineering for an weather observational equipments.

Major EMC Engineering records

1. Samsung electronics co., EMC engineering and design of the semiconductor production plant (May 1988)
 - ESD and malfunctions of the CRT monitor on the mass production lines
2. Special filter design and supply to 10 companies (Nov.1988)
 - Low frequency band filter to meet the government requirement.
3. Special 3 phase filter design and supply to the Tongil group (May.1989)
 - Special 3 phase filter design on demand by Tongil group request
4. Samsung electronics co., Blocking filter development of home automation (May.1989)
 - Blocking filter used for home automation, 145kHz, FSK modulations
5. Special filter development for magnetron oven from Daewoo electronics (July. 1989)
 - For exporting to the European countries
6. Power line filter development for the card public phone (Oct. 1989)
 - Supply to the 10 manufactures in the Korea
7. Power distributor development for Korea government administration computer (Oct.1989)
 - Requested by ETRI, Korea government controlled R&D center.
8. EMC engineering of Mokpo radio station on the power line and radio disturbance (Oct.1989)
 - EMC engineering on the ac power and antenna system
9. EMC engineering of the Hankiore newspaper company (Feb. 1990)

- EMC engineering on the EMI and ESD problems
- 10. EMC engineering of Samsung electronics co. (Aug. 1990)
 - Engineering of the magnetic disturbance on the CRT monitor.
- 11. EMC engineering of Wang computer (Nov. 1990)
 - EMC engineering of the computer system against various class test, LR and etc.
- 12. EMC engineering of the Samsung electronics co. (Aug. 1990)
 - EMC engineering on the Fax, 70MHz band interference emission
- 13. Samwoo electronics co., modular jack development (Feb. 1991)
 - Development of the phone modular jack which has a EMI rejection functions
- 14. EMC engineering on the MIL-STD- 461D from the Samyang chemical co.,
 - MIL-STD EMC engineering on the RE,CE of the military Tank
- 15. Engineering of the ISDN multiplexing technology from the Korea Telecom., (Mar. 1991)
 - R&D activities of ISDN technology
- 16. Military EMC engineering of the military purposed truck and motor vehicle. (May 1991)
 - EMC engineering on the ignition noise, ground structure and others on the car system. This engineering was requested from the Asia motor co.
- 17. Military EMC engineering on the various car parts (Aug.1991)
 - EMC engineering and design on the heater, air conditioner and other parts requested from Dongwhan industrial company.
- 18. R&D activities on the game machine development (Aug. 1991)
 - Engineering on the circuit design and EMC problems requested by Cosmo-tech.

19. EMC engineering on the automatic control system malfunction (Feb. 1992)

-EMC engineering for the malfunction of the bowling machine requested by P-plus

20. EMC engineering regarding malfunction on the LG refining factory (Jul. 1992)

-EMC engineering was requested by LG oil refinery, Yecheon. Counter measuring the malfunctions and influence of an intended radiator, VVVF, CVCF and data highway.

21. Development the wideband absorbing materials supported by Korea government

(Aug. 1992)

22. Development of the absorbing material measuring system (Nov.1992)

-Requested by Korea marine time university and Korea government

23. Development and EMC engineering of the radiated immunity monitoring system (Nov. 1992)

-An intelligent monitoring system of the motor under the radiated immunity test, requested by Hyundai motor company, Ulsan

24. EMC engineering of the commercial ship (Feb.1993)

- Requested by LR, DNV,GR and KR

25. EMC engineering on the malfunction of the EMC test facilities (Dec. 1993)

-Requested by Fine com. co.

26. EMC and general environmental engineering (Mar.1993)

- Regarding EMC, sound, lightning, ESD and others environmental, requested by SK comm.. co.

27. EMC engineering of the power monitoring system " SCADA" (Jun.1993)

- Engineering of the malfunction analysis and counter measurement for SCADA system in the power plant, requested by Hyundai heavy industry.

28. Development of the video cable connector which has a high filtering function on the 50-200MHz band requested by Bum-A (July 1993)
29. Development of the automatic car antenna test system and S/W requested by Taipyungyang. (July 1993)
30. EMC and general environmental engineering requested by SK comm.(Aug.1993)
 - For mobile phone station
31. Lightning protection engineering on the Golf club "Dongjin" (Sep.1993)
32. EMC engineering of the load cell type scale (Sep.1993)
 - Requested by Han electronics Scale Company.
33. Supply the total EMC test facilities to the national machinery R&D center(Feb.1994)
34. Development the Ozone generator requested by Chonghab (June 1994)
35. EMC engineering of the welding machine controller, requested by Chohung co.(Sep.1995)
36. EMC engineering of the Military information terminal for MIL STD 461B (Oct.1995)
 - Military EMC design for the military information terminal, requested by Kiwon electronics.co
37. EMC engineering and design of the high speed railway, requested by Korea high speed railway construction company (Jan.1995)
38. EMC analysis and engineering of the gas compressor and its controller (July.1995)
 - Requested by SK oil refinery Ulsan factory
39. EMC engineering of the personal computer, requested by Hyundai information co.(Feb.1995)
40. EMC engineering and design of the ship level measuring system, Hanlla level co.(Feb.1995)

41. 200V/m immunity and EMC measuring system design and supply to the Korea vehicle test laboratory Cheonan (Feb. 1995)

- Anechoic chamber constructions, GTEM CELL and EMC test facilities Turn-key base for 300MHz-40GHz

42. EMC engineering and design of the Ship driving larger motor test system (May.1995)

-Requested by Hyundai heavy industrial R&D center, Mabukri

43. Export and supply the intelligent immunity test system to:

Japan TDK 4set, KAITECH 2set, Hyundai 2set, KAIST 1set, RRL 1set, ETRI 2set , EMC compliance management co USA. Taipei CCS and etc.

44. EMC engineering of the automatic ship monitoring system (May 1996)

-Requested by Samsung heavy industrial co.

45. EMC engineering of the multimedia production lines in the Samsung electronics (Feb.1996)

- Total EMC engineering of the multimedia production lines

46. EMC engineering of the LG industrials co.(May.1996)

- Mass production lines.

47. EMC total engineering of the Daewoo lift car, loader, excavator and others (May 1996)

48. EMC engineering and design of the excavator controller (May 1996)

- Requested by Samsung heavy industrial co.

49. EMC engineering and design of the ship monitoring system (June.1996)

-Requested by Bum-A precision co.

50. Developed a ferrite absorber characteristics measuring system and supply to the SAMWHA electronics co.(Aug.1996)

- Tri-plate type and parallel plate type measuring system with S/W

51. EMC total engineering of the rolling stock, DAEWOO heavy industrials co.(Sep. 1996-1997)

-EMC engineering and design for the IGBT in the rolling stock

52. EMC engineering and design of the DVR and tuner, requested by Beeho (Oct.1996)

53. Total EMC engineering of the Pohang iron & steel co. (Oct.1996)

- Electric steel plate mass production plant

54. Military EMC engineering and design of the De-gaussing system (Nov.1996)

-Requested by DONG-A electric co.

55. Total EMC engineering and design of the Samsung medical center (Nov.1996)

56. EMC test facilities design and supply for National marine time university (Dec.1996)

57. EMC test, 10m Open test site design and construction (Dec.1996)

- Supply antenna tower, Turn table, FRP Dome and 10m test site localized

58. EMC test facilities design and supply for KAIST, Daejeon (Jan. 1997)

- Radar Cross Section for 300MHz-40GHz, full anechoic chamber and control S/W

59. Total EMC engineering of the Otonics's various sensor (Jan. 1997)

60. EMC engineering of the various car parts in accordance to the GM requirements (Feb.1997)

-Requested by Hyosung motor co.

61. Military EMC engineering of the marine chart, Daeyang Electric.co (Feb. 1997)

62. EMC engineering of the ship monitoring system, Samsung heavy industrials co.(Feb.1997)

63. Military EMC engineering and system design of the top car, MIL STD 461D, Kyungchang co.(Mar.1997)

64. EMC engineering and design of the KISCO EMC center (Mar. 1997)

- Turn key EMC test system design for KISCO EMC test center

65. EMC engineering of the radio hazard instructions (Apr.1997)

- Requested by Korea Industrial Safety control Office

66. Development of the Loop and rod antenna requested by Shinhan co.(Apr.1997)

67. Military EMC engineering and evaluation of the 0000 military Command head quarters (Apr.1997)

68. EMC education of the member of Malaysia military R&D center (May.1997)

-Requested by Korea government and Daewoo ins.

69. EMC engineering and design of the CDQ digital displayer (May 1997)

- Requested by SORISAM

70. EMC design of the medical equipment (June. 1997)

-Requested by SEOTONG medical co.

71. Military EMC design and engineering of the battery charger and power supply (Oct.1997)

72. Development and supply the radio monitoring system (Dec.1997)

- Requested by Korea radio R&D center

73. EMC engineering and design of the ship engine controller (Jan.1998)

-Requested by SAMSUNG heavy industry

74. EMC design of the cash payment machine (Jan. 1998)

-Requested by MECHATRONICS co.

75. Total EMC engineering and design of the commercial ship' EMC environmental (Aug.1998) - Requested by R&D center of the HYUNDAI heavy industry.

76. Development and supply the EMC monitoring system (Feb. 1998)

- Requested by ETRI (Korea Electronics and Telecom. research Institute)

77. Total EMC engineering and optimal design of the commercial ship (Feb. 1998)

- Requested by SAMSUNG heavy industry

78. Total EMC engineering and design of the military electronic switching system (Mar.1998)

- Requested by SAMSUNG heavy industry

79. EMC engineering and design of the various motors and part for vehicle (May 1998)

- Requested by IG motor co.

80. EMC engineering and design of the semiconductor mass production plant (May. 1998)

- Requested by LG information and telecommunications co.

81. Total EMC engineering and design of the next generation nuclear power plant (Oct. 1998) - Requested by KEPCO

82. EMC engineering and design of the Gas + Steam combined power plant (Nov. 1998)

- Requested by ILSAN Combined power plant

83. EMC design and engineering of the lift car and excavator (Mar.1999)

-Requested by DAEWOO

84. Total EMC engineering and design of the electrical driving car (July.1999)

- Requested by HYUNDAI heavy industry

85. Total EMC engineering and design of the semiconductor mass production plant (July.2000)

- Requested by SAMSUNG Semiconductor

86. Total EMC engineering and design of the satellite ROKET (Nov.2000)

- Requested by HANHWA aeronautics & space

87. Development and supply the MIN CHAMBER which used for GHz band(Aug.2001)

- Supply to the SURI HITECH, SAMSUNG ELECTRONICS, LG and others, - Patent listed

88. Development and supply the intelligent radiated immunity test system and S/W (Nov.2001)

- Proposed it's results to the IEC committee and export to the China

89. Development of the high speed and long distance ADSL (Dec.2001)

- Patent listed

90. EMC engineering and design of the electronics watt meter (Mar.2002)

- Requested by CM PARTNER co.

91. Total EMC engineering of the security system (April. 2002)

- Requested by WIT INFORMATION co.

92. Total EMC engineering of the subway system May 2002)

- Requested by MOTION POSTER co.

93. Total EMC engineering and design of the SEOUL-INCHEON AIRPORT railway
construction plant (Nov.2002-2008)

- Worked together with ALSTOM France, Bechtel USA

94. Total EMC engineering and design of the tower crane mal functions (Aug.2003)

-Requested by HYUNDAI HEAVY INDUSTRY. Ulsan

95. Total EMC engineering and design of the power distribution system (Oct.2004)

-Requested by Korea machinery R&D center on Changwon

96. Total EMC engineering and design of the SAMSUNG semiconductor mass production plant (Nob.2004)

-Requested by ELRIM ENC and SAMSUNG elec.

97. Total EMC engineering and design of the SAMSUNG precision chemical plant (Oct. 2004)

- Requested by SAMSUNG PRECISION CHEMICAL, Ulsan plant

98. Total EMC engineering and design of the SAMNAM chemicals plant (April 2005)

- Requested by SAMNAM CHEMICAL co. Yecheon

99. Total EMC engineering and design of the semiconductor mass production plant for the air conditioning system (June.2006)

- Requested by SAMSUNG SDI, OLED production plant

101. Total EMC engineering and design of the KIMHAE-PUSAN railway (Aug.2006)

102. Total EMC engineering and design of the semiconductor mass production plant (Aug.2006)

-EMC engineering with Hyunjong for Hynex semiconductor co. T-9 project

104. S/W development engineering for the mobile Radio Hazard and Field strength measurement system with GPS (Aug. 2004 - Dec. 10. 2006)

- Requested by ETRI (Electronic & Telecommunications Research Institute)

105. EMC engineering for the optimal grounding and bonding design for the remote, optical repeater against lightning surge. (Jan. 2007)

- Requested from KT (Korea Telecommunications)

106. Total EMC engineering and design of the semiconductor mass production plant (July. 2007)

-EMC engineering with Hyunjong for Hynex semiconductor co. T-10 extension

107. EMC engineering of the Radio hazard analysis for KARI(Korea Aerospace R&I)

- Analysis for radio hazard analysis and influence from the GHz aerospace base station
(Nov. 2006)

108. EMC engineering and counter measuring for the radio hazard analysis from the kW output radar system. Samsung Thales. Yongin . Oct. 2007.

109. EMC engineering for the Digital protection relay of HYOSUNG. Oct. 2007 Fault shooting and EMC debugging of Digital protection relay which has been used in the KEPCO's power plant.

110. EMC engineering for the ADSL/VDSL repeater which has a rejection functions against AM and HF radio interference.

- Korea Telecom (KT) , Daejeon future laboratory, Oct. 2007

111. EMC engineering for eye sight checking machine of POTECH. Oct. 2007

112. EMC consulting for the new refinery factory of the SK ENERGY, Ulsan new chemical plants. Feb. 2008

EMC consulting of the newly constructed oil refinery factory in the Ulsan, SK ENERGY.

113. EMC engineering for the Merlin Gerin/Schneider France, "MCCB, Molded Case Circuit Breaker" malfunctions. Mar. 24 2008.

SAMSUNG Semiconductor line 10, line 13, Whasung factory.

114. On the progressing of the EMC engineering for the refinery or chemical plants on the world

- SK, HCC project, Incheon

- SK, Alzour (NRP/EPC -0032)
- SK, FGTB 3678
- SK, Thailand project
- Hyunjong, JTC project in Singapore. Mar. 2011

115. EMS engineering of cluster of the vehicles, requested by the Preamps.
24. Feb. 2009

116. A study on the radio interference of 000 site, inter harmonics, mutual impedance and common ground coupling between FM 3kW antenna to others antennas on the shared site, requested by YTN. 06.Mar. 2009

117. A study on the EMC environment evaluation of the 000 satellite facilities from Korea Telecom (KT) 03, Sep. 2009

118. EMC engineering for the Korea Army Air force " EMC engineering for xxx " 27. Sep. 2009

119. EMC engineering for the satellite antenna of US coast guard ships from xxx. 15. Oct. 2009

120. EMC engineering for the CO₂ sensor from the Bitsem electronics. 20.Oct. 2009.

121. EMC engineering for the optical home network distributor from Barun Technology Corp. 30. Oct. 2009

122. Supply the Radio monitoring system for the high speed rail way. April. 2010
- Daegu to Busan

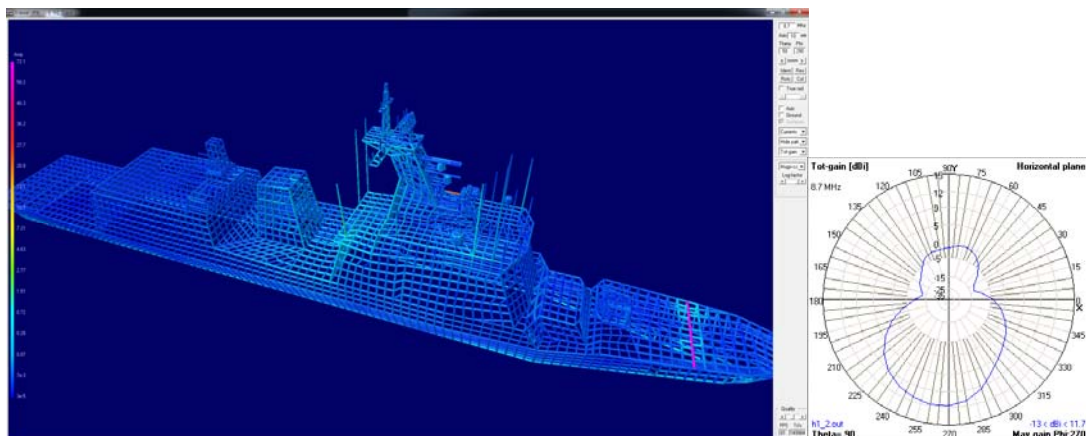
123. Supplied the advanced Radiated immunity test system, RAPA. April. 2010
- Commercial EMS test system

124. Supplied the advanced Radiated immunity test system, KOMERI. April. 2010.
- Military EMS test system

125. EMC engineering for Eujeongbu light rail way, Nov. 2010. Siemens
- LG construction & Siemens

126. Effective Isotropic Radiated Power Measurement system, RRA, Nov. 2010

- Radio Research and Laboratory of Korean government
- 127. Developments of the High Altitude Electro Magnetic Pulse (HEMP) simulator. Mar. 2010
Requested by 0000
- 128, Developments of the 300A, 380VAC EMP power line filter and certificated the MIL STD 188-125. 2011.
- 129. Development of the "Direct Reclaimable EMP hardening Shelter " Nov. 2011
Requested by The National Korea Military Academy.
- 130. EMC engineering of the Abu Dhabi, UAE "Power Plant., " *EMAL Phase 2 CAPP Project*"
08.2013. Requested by SAMSUNG engineering
- 131. EMC engineering of the 3th Airforce Traning airport, Sacheon. 11.2013
Rquested by 3th Airforce Training airport on Shacheun.
- 132. Total EMC engineering for the Submarine " Jiangbogo III Batch -1". 11. 2013
Requested by DSME,
- 133. ReaLship EMC engineering for the Submarine " Jiangbogo II " 12. 2013
Requested by DSME
- 134. EMC engineering for the Submarine " Jiangbogo III, Batch-2 " 2017.02.21
Requested by DSME
- 135. EMC engineering for Military ship. 2017.06.15, U-nam marine co.
- 136. Study on the EMP Standardizations of Korea Defense Department.
- 2017.06.26- 2019.01
-Korea EMP standards for shelter design, constructions and evaluation
- 137. EMC design & engineering for Military Frigate ship of the Philippines Navy Dep. 2017.08.30
-Requested by Hyundai Heavy Industry



138. RAZARD analysis for the High power PASSIVE ARRAY RADAR, 2017.09.15

-Requested by Hanwha THALES