

ON TARGET ALIGNMENT®  
Weapon and Electronic Systems



TAM İSABET MUVAZAAT  
Silah ve Elektronik Sistemleri

**ON TARGET ALIGNMENT**  
Weapon and Electronic Systems



**TAM İSABET MUVAZAAT**  
Silah ve Elektronik Sistemler

*"Moves You On Target"*



[info@ontargetalignment.com](mailto:info@ontargetalignment.com)

OTA

INTRODUCTION & COOPERATION ISSUES

July 03, 2020



# ON TARGET ALIGNMENT® Weapon & Electronic Systems

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## SERVICE SECTORS

- ▶ ALIGNMENT
- ▶ FIRE CONTROL SYSTEMS & E/O
- ▶ CWI / SSCWI TRANSMITTER
- ▶ GUN & SMALL ARMS
- ▶ LAUNCHERS
- ▶ COMMAND & CONTROL SYSTEMS
- ▶ UNDERWATER SYSTEMS
- ▶ COMMUNICATION SYSTEMS
- ▶ NAVIGATION SYSTEMS
- ▶ CABLING
- ▶ MATERIAL SUPPLY
- ▶ TRAINING
- ▶ FIBER OPTIC

[Search](#)

## HIGHLIGHTS

ON TARGET ALIGNMENT Weapon & Electronic Systems

ON TARGET ALIGNMENT®  
Weapon & Electronic Systems

A collage of images showing various military equipment and a ship at sea.

## AREAS OF EXPERTISE



- \* Test
- \* Survey / Inspection
- \* Maintenance
- \* Repair / Refit / Refurbish
- \* Overhaul



## COMPANY PROFILE

- ❖ **OTA** is %100 Turkish shared private company and based in Istanbul.
- ❖ **OTA** is the **first and only company** of Turkey, where whole engineering support services as certified meet in one body beside Turkish Naval Shipyards, in areas of :
  - Static & Dynamic Alignment
  - Fire Control Systems
  - Gun & Small Arms
  - Launchers & Guided Missiles
  - Command & Control Systems
  - Electro-Optics & Laser Systems
  - Sonar & Underwater Systems
  - Navigation Systems
  - Communication & Crypto Systems
  - Power Electronic Systems



## COMPANY PROFILE

- ❖ Multinational employees (ex-Turkish and Foreign Navies).
- ❖ All staffs certified by international manufacturers and training centers.
- ❖ All activities can be served both in land or abroad / overseas.
- ❖ Facility Security Clearances (NATO SECRET and NATIONAL SECRET).
- ❖ Quality Assurance Certificate (ISO 9000-2008)
- ❖ Service Place Sufficiency Certificate (TSE-HYB)
- ❖ With 25 years of experience in Navy we do support;  
Static-Dynamic Alignment, Repair-Maintenance, Overhaul, Integration,  
Modernization, Training, Project Management,  
Integrated Logistic Support (ILS), Configuration Management activities.<sup>4</sup>



## CAPABILITIES

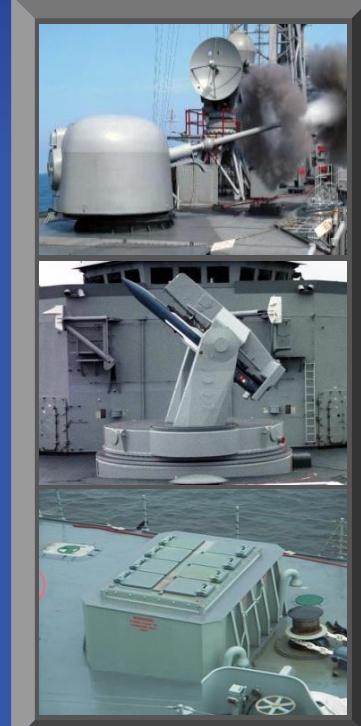
### Alignment



### System



### Weapon



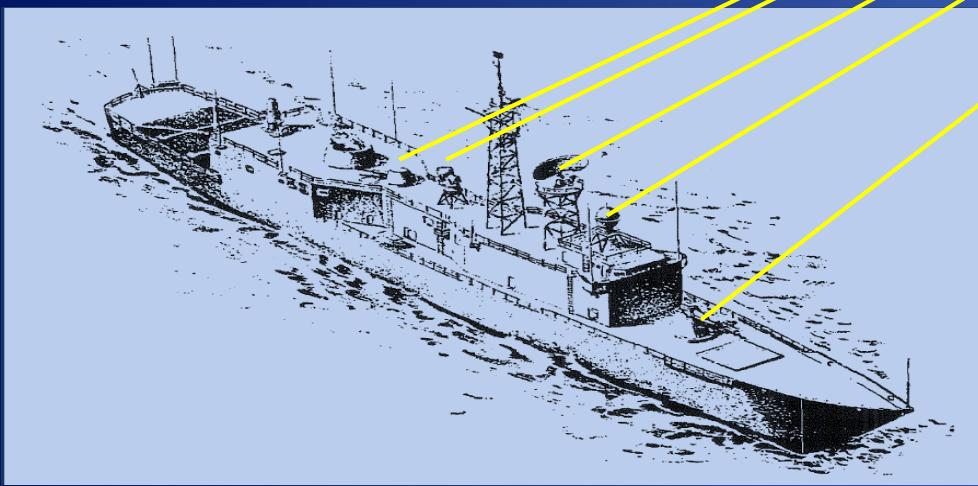
### Integration





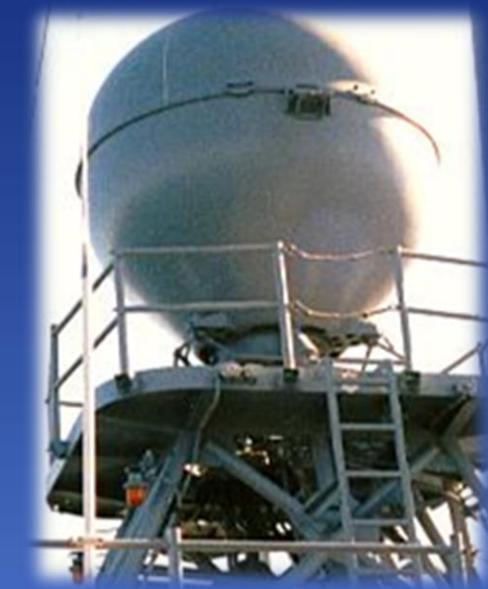
## ALIGNMENT

is to ensure that all **SENSORS** and **WEAPONS** on a platform, when directed to the same static or dynamic object in space, point to that same static or dynamic object within the defined tolerances.





## FIRE CONTROL & ELECTRO-OPTIC-LASER SYSTEMS



- REPAIR
- MAINTENANCE
- OVERHAUL
- MODERNIZATION
- INTEGRATION
- TRAINING





## WEAPON SYSTEMS



- REPAIR
- MAINTENANCE
- OVERHAUL
- MODERNIZATION
- INTEGRATION
- TRAINING





## GUIDED MISSILE & LAUNCHING SYSTEMS



- REPAIR
- MAINTENANCE
- OVERHAUL
- MODERNIZATION
- INTEGRATION
- TRAINING





## PRODUCTS

### VIDEO ANALYSIS SYSTEM



### G3 & HK33 POLYCARBONATE MAGAZINE



### GUN FUME EXTRACTOR



### FUZE EXTRACTOR ROBOT





## PRODUCTS

### OTaweas: ON TARGET ALIGNMENT Weapon Expulsion Analysis System



SUBMARINE SIMULATOR FOR GUIDED MISSILE & TORPEDO TUBES

ON TARGET ALIGNMENT®  
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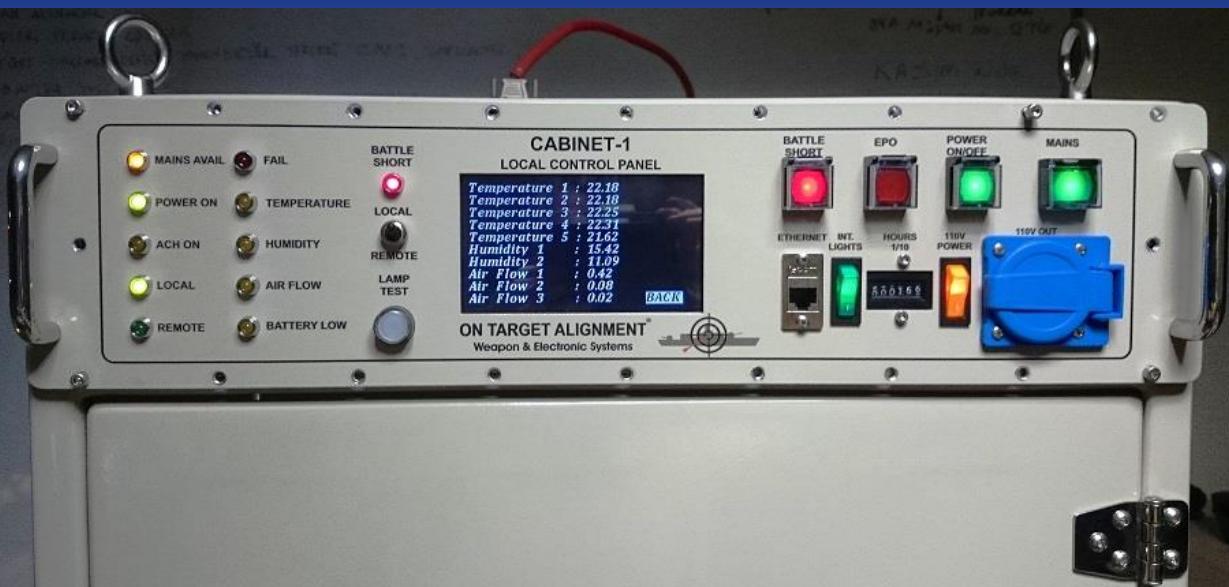
## PRODUCTS



OPERATOR CONSOLE



## PRODUCTS



ELECTRONIC EQUIPMENT CABINET

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## PRODUCTS

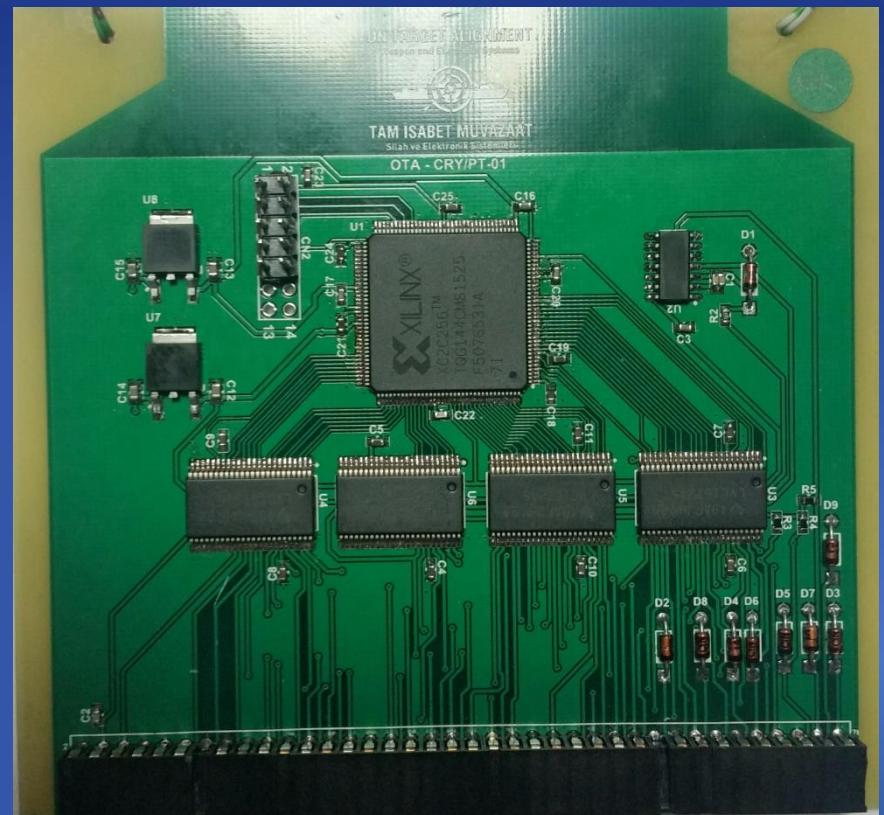


UNDERWATER OPERATOR CONSOLE



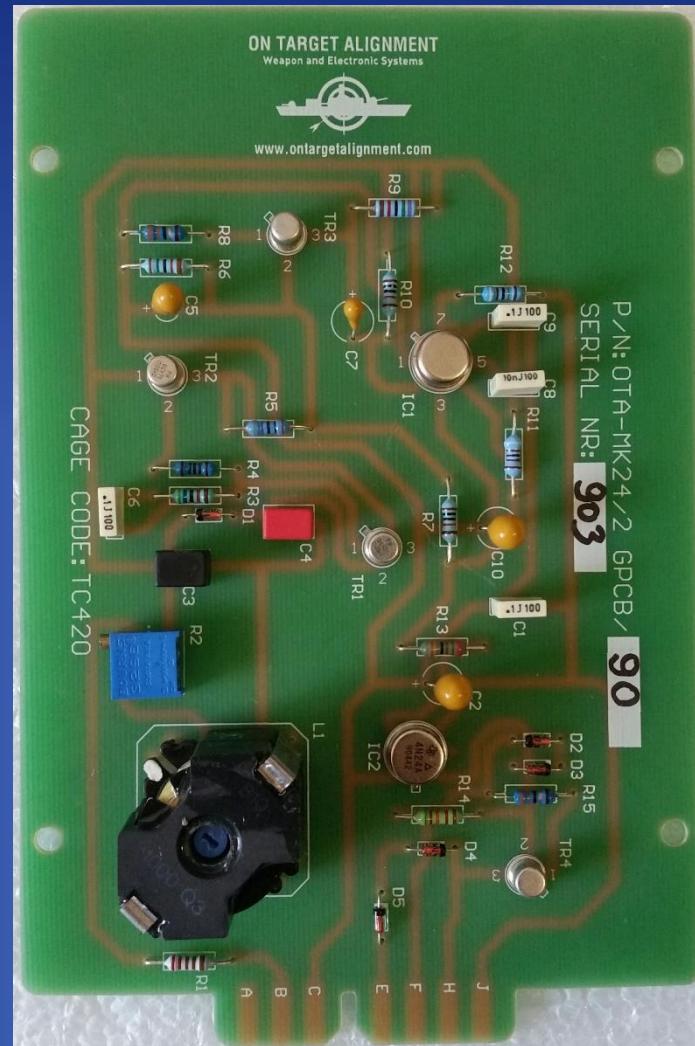
## PRODUCTS

Nationalization of Imported Products  
KG40 Communication & Crypto System  
CRY-1 PCB's for Turkish Naval Forces  
Command





## PRODUCTS

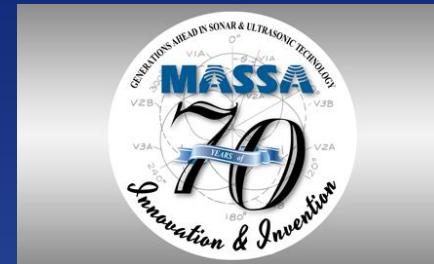


Nationalization of Imported Products  
TIGERFISH Torpedo Guidance PCB's  
for Turkish Naval Forces Command



## COOPERATIONS & REPRESENTATIVES

- ❖ Exclusive Representative of MASSA-USA Products Co. since 2015.
- ❖ Agreement signed in 2012 including;  
**MK-92 Fire Control System** Regional Maintenance,  
**TF-2000 New Generation Turkish Frigates Project.**
- ❖ Exclusive Representative Agreement signed-2016.
  - Machine Control Systems for both Military & Commercial Vessels.
- ❖ Representative Agreement signed October-2018.  
Pistol – Rifle - Machine Gun - Anti-Aircraft Guns – Artillery - Rockets - Armored Vehicles – Tank – Grenades - Ammunition - Bullet .





## COOPERATIONS & REPRESENTATIVES

# Raytheon

Ongoing Negotiations & Projects such as;

- ❖ INTERNATIONAL MAINTENANCE CENTER Establishment in Turkey within Offset Obligation.
- ❖ Providing Engineering & Technical Support for RAYTHEON's UNDERWATER SYSTEMS,
- ❖ GUIDED MISSILE TEST STATION Establishment in Turkey,
- ❖ Technical Support for PHALANX UPGRADE PROJECT





## OUR EXPERIENCES



TCG KILICALIPASA – TCG PIYALEPASA

OUR FIRST INTEGRATION PROCESS STARTS WITH EX-TCG KILICALIPASA AND EX-TCG PIYALEPASA'S HARPOON G/M INTEGRATION PROJECT IN THE BEGINNING OF 1990'S WHEN OUR TEAM WAS IN TURKISH NAVY.



## OUR EXPERIENCES



DURING 1990'S, OTA TECHNICAL TEAM HAS BEEN INVOLVED IN TRACK I (TCG YAVUZ, TCG TURGUTREIS, TCG FATIH, TCG YILDIRIM) AND TRACK II-A (TGC ORUCREIS, TCG BARBOROS) COMMAND & CONTROL, WEAPONS, FIRE CONTROL SYSTEMS, NAVIGATION SYSTEMS INTEGRATION AND ALIGNMENT PROCESSES.



## OUR EXPERIENCES



KNOX CLASS FRIGATE

K-5 PROJECT WAS INTEGRATED TO COMBAT SYSTEM IN END OF 1990'S FOR UPGRATING CONSOLES IN CIC (COMBAT INFORMATION CENTER), WHICH BASED TO GENESIS IN PERRY CLASS FRIGATES.



## OUR EXPERIENCES



EARLY 2000'S, IN TRACK IIB (TCG KEMALREIS) COMMAND & CONTROL, WEAPON SYSTEMS, FIRE CONTROL SYSTEMS, NAVIGATION SYSTEMS INTEGRATION AND ALIGNMENT PROCESSES.



## OUR EXPERIENCES



TCG AKAR



GNSY PHALANX WORKSHOP

SEVEN PHALANX SYSTEMS (CLOSE-IN WEAPON SYSTEM) WERE DISMANTLED FROM KNOX CLASS FRIGATES; INSTALLED & INTEGRATED TO TCG AKAR, TCG YARBAY KUDRET GUNGOR, TCG OSMANGAZI AND GNSY PHALANX WORKSHOP.



## OUR EXPERIENCES



DURING ESTABLISHMENT OF ANTENNA OVERHAUL BUILDING AND UN-ECHOIC CHAMBER FOR NEAR FIELD MEASUREMENT, OUR TEAM HAS PARTICIPATED IN ALL PROCESSES INCLUDING CERTIFICATION AND TEST SCHEDULES.



## OUR EXPERIENCES



DURING MK-92 FCS ANTENNA OVERHAUL PROCESSES, OTA'S TEAM WAS IN CHARGE OF;

- UNINSTALLING STIR & CAS ANTENNAS FROM PLATFORMS TO WORKSHOP,
- PERFORMING ALL OVERHAUL PROCEDURES,
- REINSTALLING ANTENNAS TO PLATFORMS.



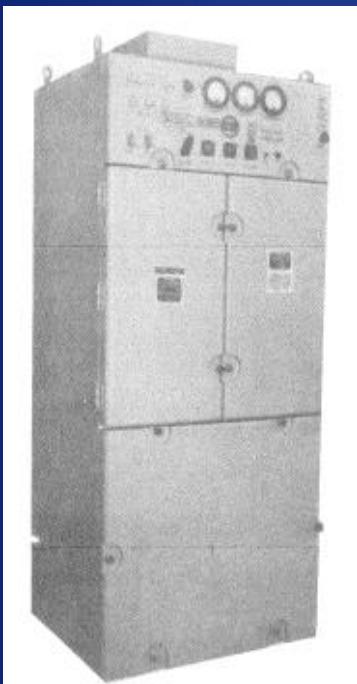
## OUR EXPERIENCES



OTA'S SYSTEM SPECIALISTS PERFORMED THE INTEGRATION PROCESSES OF PERRY & MEKO CLASS FRIGATES MK-41 VLS (VERTICAL LAUNCHING SYSTEM).



## OUR EXPERIENCES



IN PERRY CLASS FRIGATE ESSM UPGRADE PERIOD, SSCWI (SOLID STATE CONTINUOUS WAVE ILLIMUNATION) INSTALLATION AND INTEGRATION TO GENESIS, FCS, MK-41 VLS AND MK-13 GMLS INSTEAD OF OLDER CWI, HAS BEEN PERFORMED



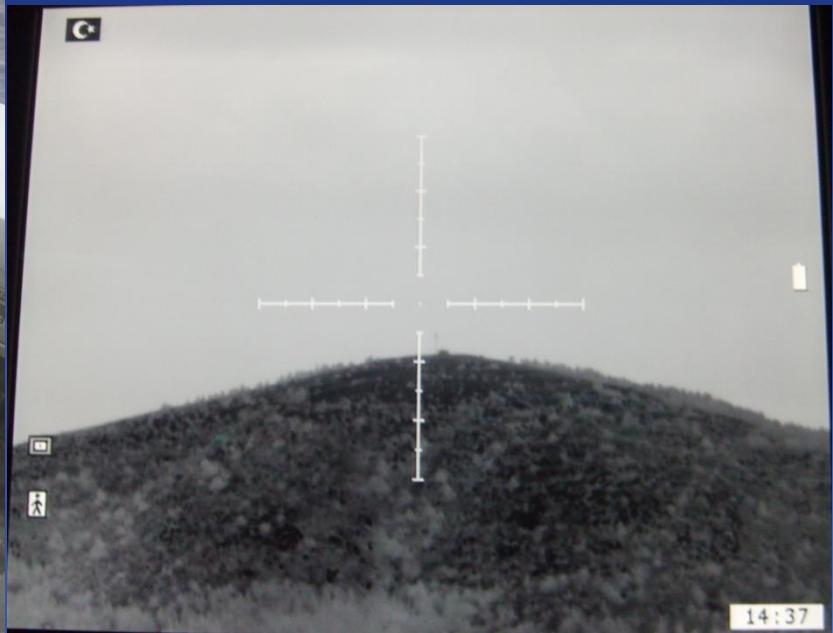
## OUR EXPERIENCES



CAS & STIR, 8 OF PERRY CLASS FRIGATES ORDALTS HAVE BEEN  
PERFORMED BY OUR SYSTEM EXPERTS.



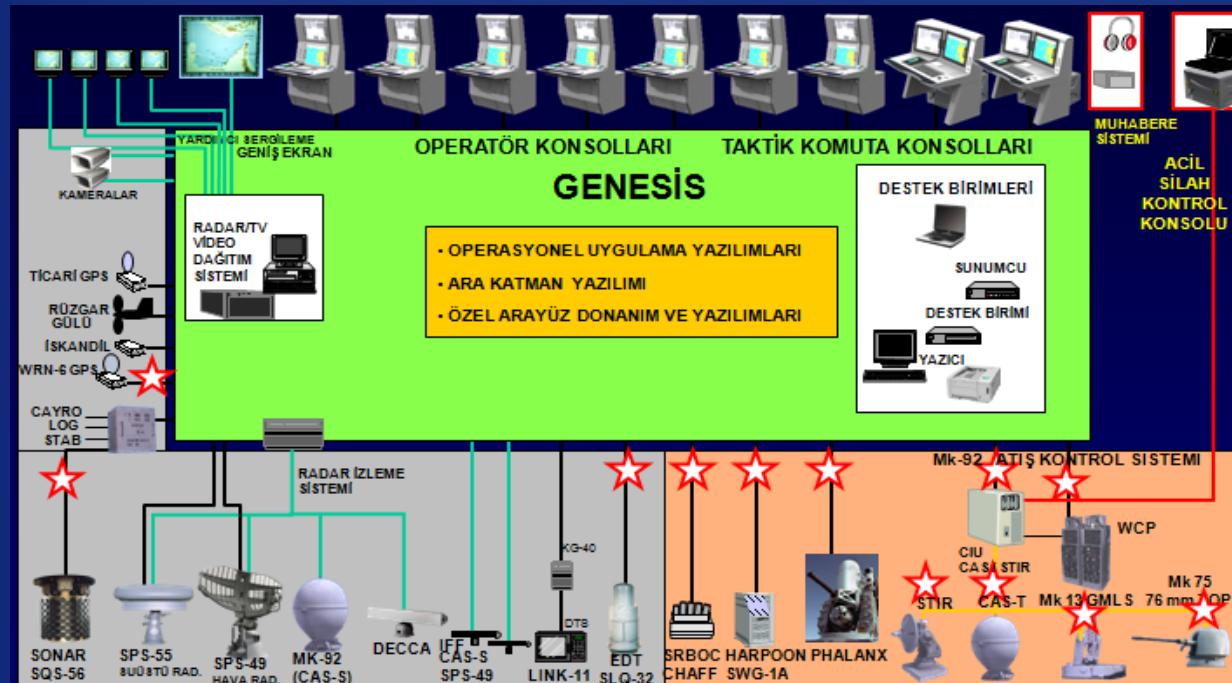
## OUR EXPERIENCES



OUR TEAM HAS BEEN JOINED ALL STEPS OF ASELSAN THERMAL CAMERA (ASIR-D) INSTALLATION AND INTEGRATION INTO PERRY & MEKO CLASS FRIGATES.



## OUR EXPERIENCES



- INTEGRATION & CABLING
- STW (Setting To Work)
- HAT (Harbour Acceptance Tests),
- SIT (System Integration Tests),
- SAT (Sea Acceptance Test),
- ALIGNMENT AND SEA TRIAL TEST Processes of GENESIS.



## OUR EXPERIENCES

### KILIC II FAST PATROL BOAT PROJECT

- 76 mm. OTO MELARA GUN,
- 40 mm. OTO BREDA GUN,
- STING EO FCS,
- LIROD FCS,
- COMMAND & CONTROL SYSTEM,
- NAVIGATION SYSTEMS,
- COMMUNICATION,
- HARPOON LAUNCHER,

SYSTEMS INTEGRATIONS AND  
SEA TRIAL PROCESSES HAVE BEEN  
PERFORMED.





## OUR EXPERIENCES

### KILIC II FAST PATROL BOAT PROJECT

#### 40 MM. OTO BREDA GUN,

- INSTALLATION,
- INTEGRATION,
- SEA TRIAL PROCESSES,
- ALIGNMENT,
- FIRING EXCERSISES





## OUR EXPERIENCES

### MILGEM PROJECT: (National Corvette)

- 76 mm. OTO MELARA GUN,
- RAM (ROLLING AIRFRAME MISSILE)
- STING EO FCS,
- COMMAND & CONTROL SYSTEM,
- NAVIGATION SYSTEMS,
- COMMUNICATION,
- HARPOON LAUNCHER,



- ❖ INSTALLATIONS,
- ❖ INTEGRATIONS,
- ❖ SEA TRIAL PROCESSES.





## OUR EXPERIENCES

### A-CLASS MINE HUNTER PROJECT

- 30 MM. OTO MELARA GUN,

5 A-CLASS MINE HUNTER's Gun Installation, Integrations, Sea Trial Processes have been performed.

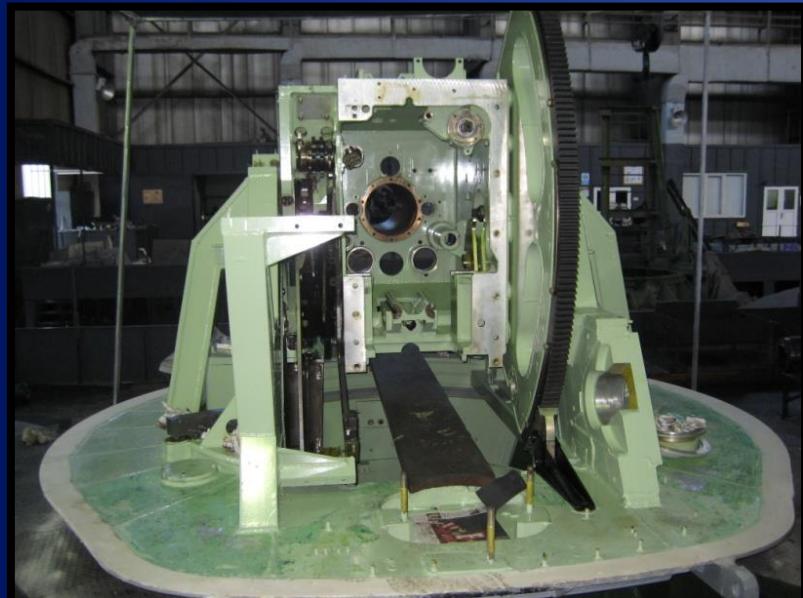




## OUR EXPERIENCES

TUNUSIAN NAVY 76/62 mm.  
GUN OVERHAUL PROJECT

3 OF TUNUSIAN NAVY SHIP 76 mm.  
GUN OVERHAUL PROCESSES.





## OUR EXPERIENCES

### NATIONAL FCS (TAKS) DEVELOPMENT PROJECT



OUR TEAM JOINED ALL PROCESSES OF NATIONAL GUN FIRE CONTROL SYSTEM DEVELOPMENT PROJECT IN KARAPINAR – KONYA.



## OUR EXPERIENCES

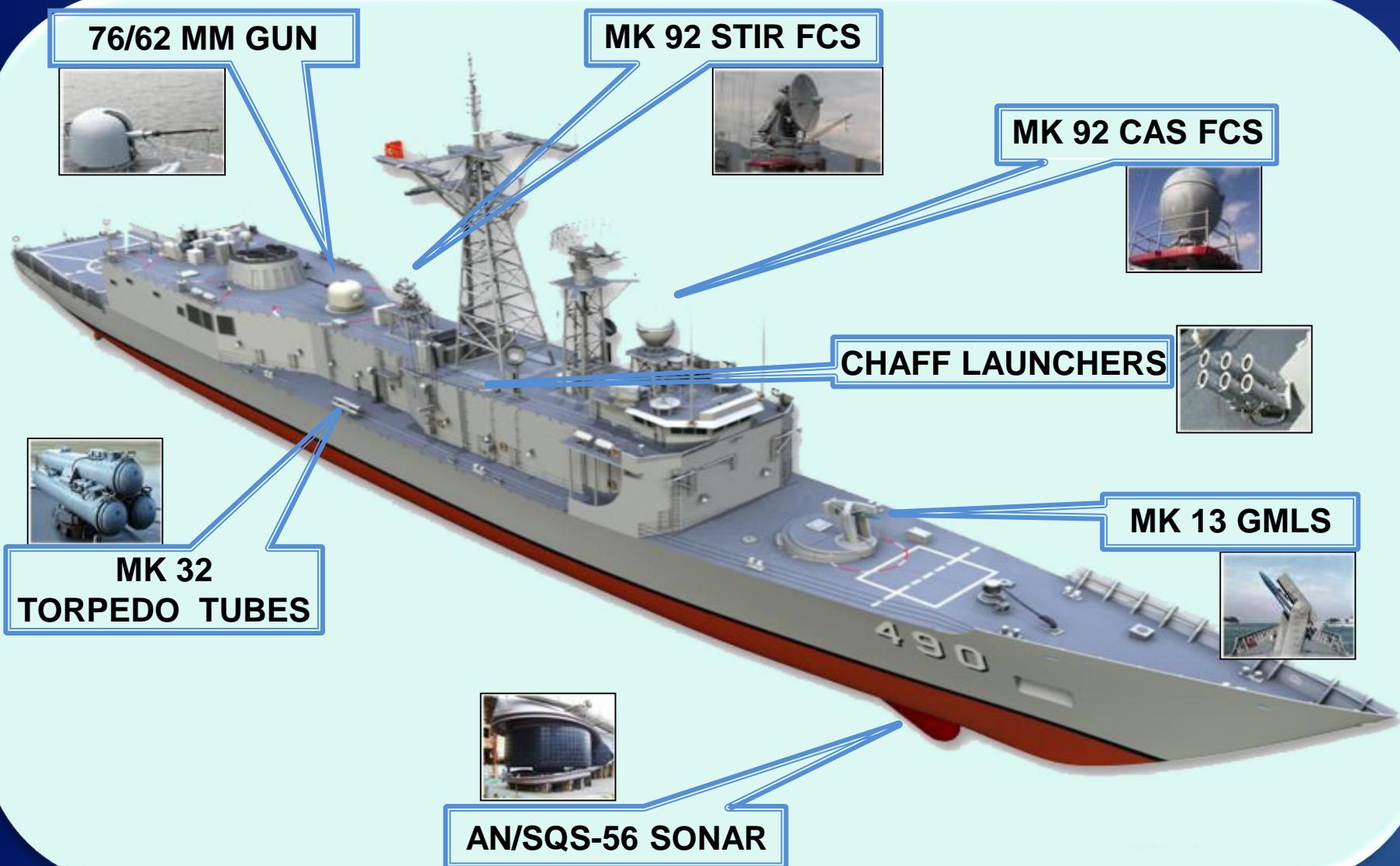
- ELECTRO-OPTICS UPGRADES OF YAVUZ & DOGAN CLASS SHIPS
- SEAGUARD REFERENCE SYSTEM (SRS) PROJECT
- LN-270 GYRO PROJECT

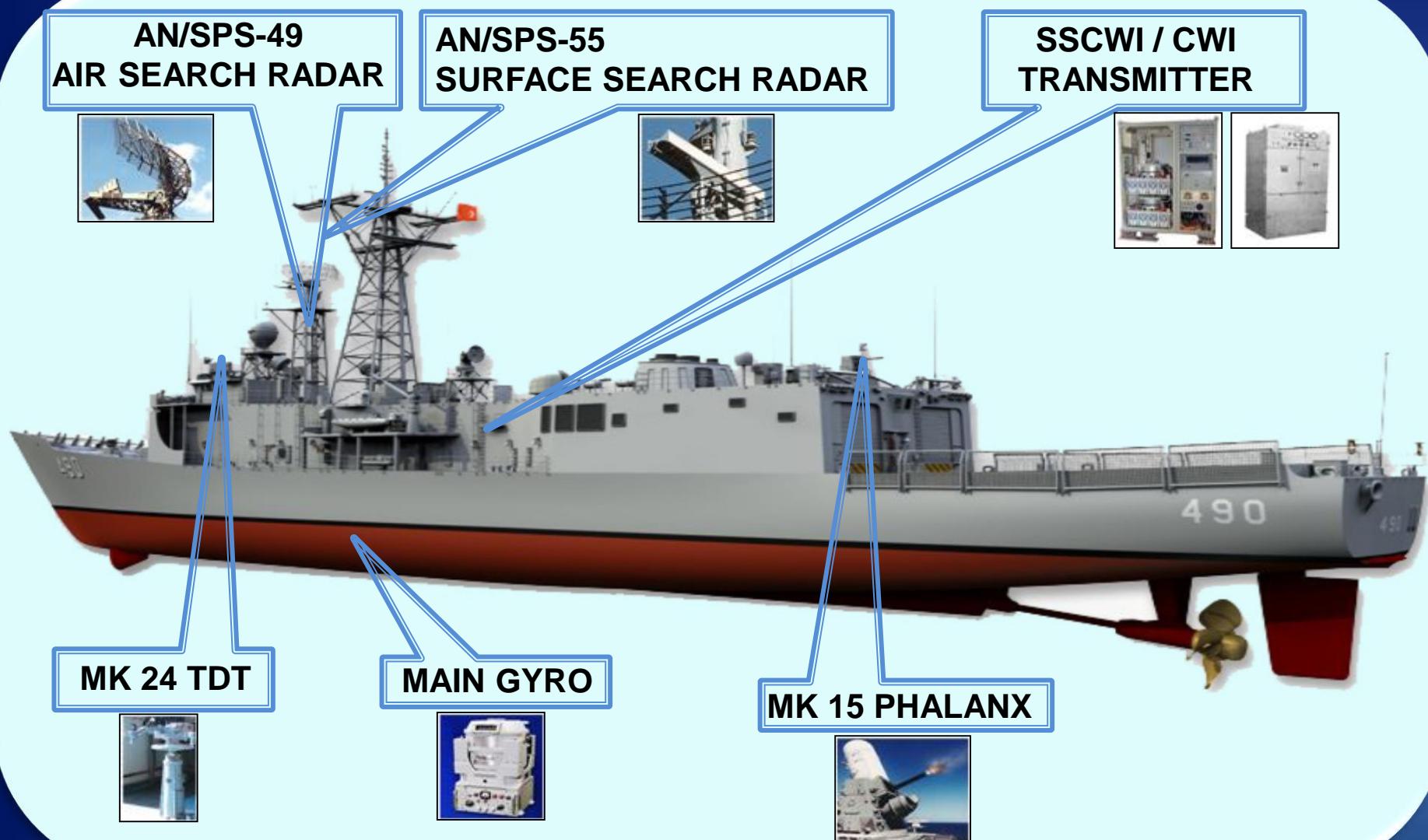
(INTEGRATION & ALIGNMENT)

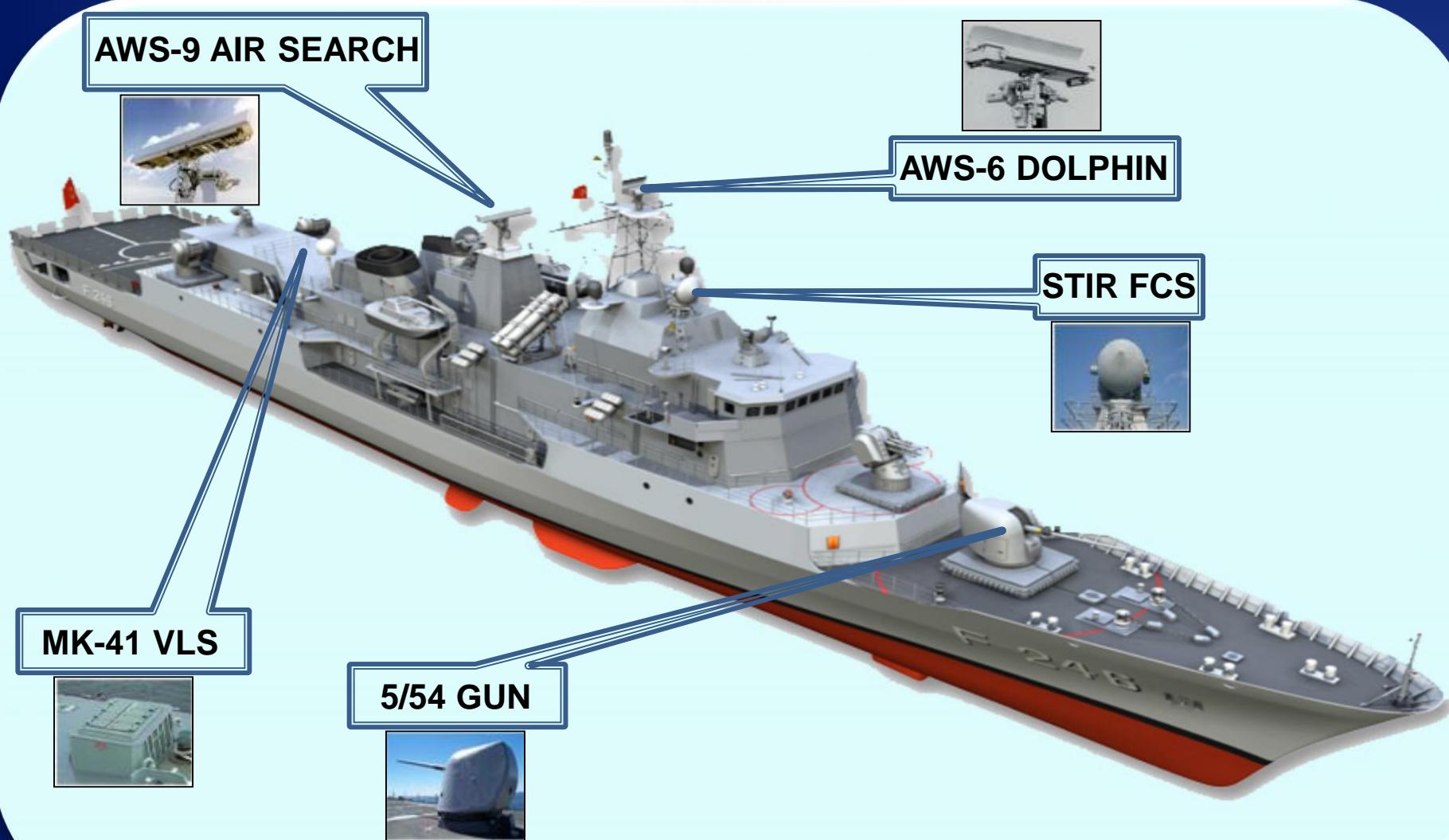


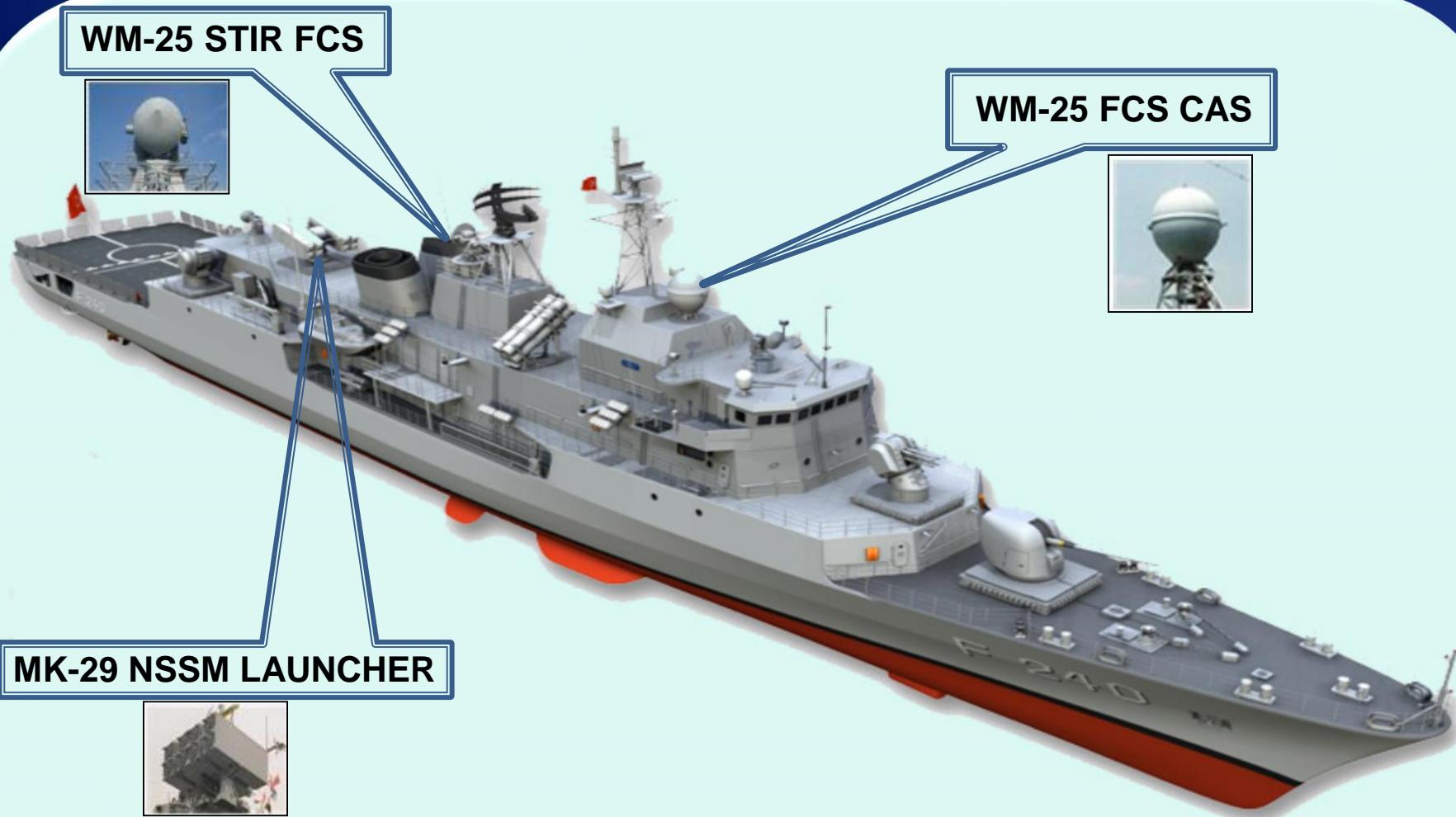


# SUMMARY OF EXPERTISES



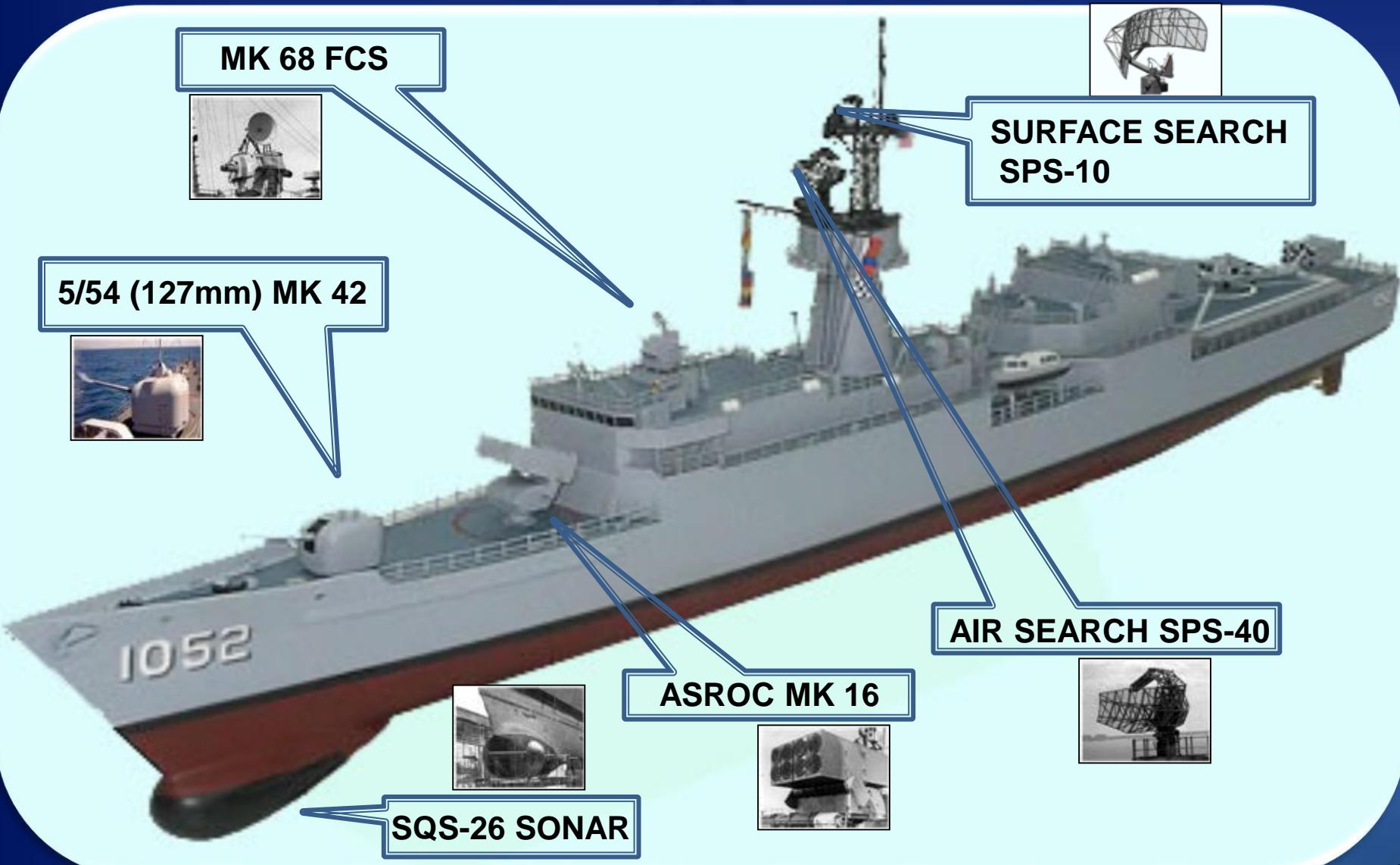














SEARCH RADAR; SMART S



MK 49 RAM





AK-726



9-LV FCS



RADAR MR-104



AK-230



MORTAR OF DEPTH  
RBU 6000

LAUNCHER  
STRELA





## REFERENCES



EUROCONTROL





## PROJECTS ON TARGET

### 1. International Maintenance and Training Center Establishment

#### Processes :

SYSTEMS	SERVICES
Static & Dynamic Alignment Fire Control Systems Gun & Small Arms Launchers & Guided Missiles Command & Control Systems Electro-Optics & Laser Systems Sonar & Underwater Systems Navigation Systems Communication & Crypto Systems	<ul style="list-style-type: none"><li>Test, Site Survey, Inspection</li><li>Repair-Maintenance, Overhaul,</li><li>Upgrade, Modernizasyon,</li><li>Installation, Integration,</li><li>Training,</li><li>Procurement,</li><li>Consultancy,</li><li>Project Management</li></ul>

#### NEEDS :

Location : Turkey

Facility Features: 15 m. Height,  $\geq 10.000 \text{ m}^2$  Factory Area, 35-40Tons Crane.

Machinery Park : Electronic & Mechanic Equipments.



## PROJECTS ON TARGET

### 2. International Maintenance and Training Center Establishment

#### Processes :

SYSTEMS	SERVICES
Static & Dynamic Alignment Fire Control Systems Gun & Small Arms Launchers & Guided Missiles Command & Control Systems Electro-Optics & Laser Systems Sonar & Underwater Systems Navigation Systems Communication & Crypto Systems	<ul style="list-style-type: none"><li>Test, Site Survey, Inspection</li><li>Repair-Maintenance, Overhaul,</li><li>Upgrade, Modernizasyon,</li><li>Installation, Integration,</li><li>Training,</li><li>Procurement,</li><li>Consultancy,</li><li>Project Management</li></ul>

#### NEEDS :

Location : Middle-East and/or Gulf Region

Facility Features: 15 m. Height,  $\geq 10.000 \text{ m}^2$  Factory Area, 35-40Tons Crane.

Machinery Park : Electronic & Mechanic Equipments.



## PROJECTS ON TARGET

### 3. Liaison Office Organization in United States of America

Aim : Take roles in 24 Units Perry Class Frigates Transferring Program.

Location: Charleston / Jacksonville / San Diego

Needs : Establishing Facility + Technical Staff Employment.

Budget : Property Rental Cost + HR Cost + Setup + Operating Expenses.



## PROJECTS ON TARGET

### 4. Liaison Office Establishment in the Gulf Region

**Aim** : Providing engineering supports for Gulf and African Navies

**Location:** Saudi Arabia, UAE, Qatar, Kuwait, Bahrain, Oman, Jordan,...

**Needs** : Establishing Facility + Technical Staff Employment.

**Budget** : Property Rental Cost + HR Cost + Setup + Operating Expenses.



## PROJECTS ON TARGET

### 5. National Research and Development (R&D) Projects

Subject : National Gun, Electro-Optic Tracker, Mobile Weapon and Systems, National Sonar and National Machine Control System Designings, etc.



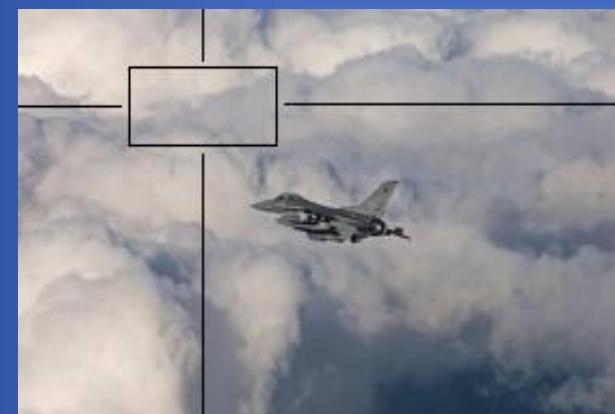


## PROJECTS ON TARGET

### 6. Taking Static and Dynamic Alignment Responsibilities of Fellow Countries

**Subject:** Pakistan, Egypt, Saudi Arabia, Qatar, Quwait, Oman, Sudan, Jordan, Morocco, Tunisia, Algeria, Libya, Indonesia, Malaysiya, African Countries, Turkmenistan, Azerbaijan, Kazakhstan,...

**Needs :** Electronic Equipments + Liaison Office + Technical Staff Employment.





## PROJECTS ON TARGET

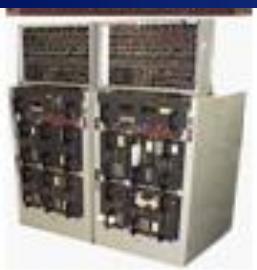
### 7. Taking Maintenance-Modernization Responsibilities of Gulf and African Countries





## PROJECTS ON TARGET

8. Taking system based Repair, Maintenance, Overhaul, Upgrade, Integration, Supply, Training, Responsibilities of Weapon & Electronic Systems.





## PROJECTS ON TARGET

### 9. To Take Training Responsibilities of the Fellow Countries

- System Operation and Maintenance (OJT: On the Job Training)
- Fire Fighting,
- Search and Rescue,
- Helicopter,
- Special Forces,
- Diving,
- Underwater Trainings (Welding, Damage Control, Submerged Vessels)
- Submarine and Escape Tower,



## PROJECTS ON TARGET

### 11. Partnership

In order to realize the projects and further with an entrepreneur that has;

- Financial Strength,
- High Level Network,

company / project partnership models would be considered by OTA.



**THANKS**

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