Engineering Standard

SAES-O-208   10 March 2012

Communications for Security Systems

Document Responsibility: Safety and Security Standards Committee

Saudi Aramco DeskTop Standards

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1 Introduction

1.1 This Standard covers mandatory requirements governing communication systems and devices used by Saudi Aramco security personnel.

1.2 This Standard shall be used in conjunction with Security Directive SEC-08 issued by the High Commission for Industrial Security (HCIS), Ministry of Interior, Government of Saudi Arabia.

2 Conflicts and Deviations

2.1 All conflicts between Standards, Requisitions for Material, related Specifications, Codes, Forms, Drawings and other documents shall be resolved as per SAES-O-201, Section 2.

2.2 Any deviations from the provisions of this Standard shall be resolved as per SAES-O-201, Section 2.

3 References

All referenced Specifications, Standards, Codes, Forms, Drawings and similar material shall be of the latest issue (including all revisions, addenda and supplements) unless stated otherwise.

3.1 Saudi Aramco References

Saudi Aramco Engineering Standards

SAES-O-201	*Application of Security Directives*
SAES-T-000	*T Series Communications Standards*

Saudi Aramco Standard Drawings

AA-036065-001	*Roof/Reflected Ceiling Plan, Typical Security Support Building*
AA-036065-002	*Building Elevation and Section, Typical Security Support Building*
AA-036065-003	*Enlarge Plan / Elevation and Details, Typical Security Support Building*

3.2 Security Directives

SEC-08	*Communications*
SEC-05	*Integrated Security Systems*

4   General Requirements

Communications systems and devices used for security applications consist of wireless and wired communications. Both technologies shall be used for transfer of voice, data and video as required by local security protocols.

Communication systems deployed for compliance with security requirements shall comply with SAES-T-000 and its referenced standards. Security specific requirements above and beyond the T series are shown below. The details of these requirements can be found in SEC-08:

All wired and wireless voice communications in and out of Security Control Centers shall be recorded and retained for a 12 month period. Recorded data shall be accessible across the network to authorized personnel.

4.1   Wireless Communications

4.1.1   All voice radio communications equipment shall have at least four channels for security, firefighting, emergency and operations.

4.1.2   The radio systems shall have the capability to access other systems in case of emergencies when the user elects to. Selection of the type of emergency by the radio system shall lead to the generation of a series of distinctive audio tones which alert to the existence of an emergency.

4.1.3   All radio equipment shall be addressable and capable of being formed in structural groups and the Operator shall have the capability of disabling a radio from accessing a group.

4.1.4   The radio channels shall be encrypted to prevent interception or eavesdropping by unauthorized radio sets or users.

4.2   Wired Communications

4.2.1   Data circuits used for security applications shall be redundant and use route diversity in their physical routing from the local security facility to the central/remote security facility.

4.2.2   The preferred medium for wired communications shall be fiber optic cable. When dictated by technical constraints copper cabling can be used as the communication medium.

4.2.3   Installation of network equipment in the gatehouse shall be avoided due to intrinsic space constraints. Network equipment for security systems shall be installed in the security support building. Typical drawings for the support building are listed in Section 3.

Field devices shall be installed in facilities complying with the applicable requirements of SEC-05.

4.3   Hotlines

Hotlines shall be provided at each security facility as specified by ISO. These hotlines shall connect to local emergency services and government security agencies as required in each area.

Revision Summary
10 March 2012   New Saudi Aramco Engineering Standard.