PROJECT AT
GUJARAT ANJAN CEMENT LIMITED
(SEWAGRAM VILLAGE, KUTCH-BHUJ, GUJARAT)

WIRELESS COMMUNICATION FOR
STACKERS AND RECLAIMERS APPLICATION

BY
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CHALLENGES:

- Wireless communication between two different protocols.
- Real time moving application.
- Interlocking of machines was done wirelessly so system must have to be extremely reliable.
- Harsh humid climate due to sea shore.
PROJECT DETAILS:

✓ Application was to control the moving machine that is Stacker- Reclaimers in material handling section remotely at control room (CCR).
✓ Plant was having 3 pairs of Stacker-Reclaimers mainly to prepare and handle stockpile of raw material required for process of cement formation.
✓ These machines are moving in the field to and fro on the tracks having length of about 600 meters.
✓ For controlling and monitoring of these machines PLC (SLC 5/3 make: Allen Bradley) installed on machines have to be communicated with Siemens PLC (S7-400) installed in Load centre 1 (LC 1) in front of the field.
✓ SLC 5/3 is having protocol DF1 where as S7-400 is having Profibus.
✓ SWTPL wireless devices successfully established the wireless link between moving machines and the protocol converter module (Make: Prosoft) in the LC1.
✓ Further ahead Data communication is established between both PLCs using Protocol converter module and from there communication is done with PLC in CCR through fibre optic.

SYSTEM INTEGRATION DETAILS:

• **Prime Bidder:** Sofcon Solutions Pvt. Ltd.

• **Wireless installation:** Sheetal Wireless Technologies Pvt. Ltd.

• **End Customer:** Gujarat Anjan Cement Ltd., Sewagram, Kutch-Bhuj, Gujarat.

• **Type of system:** Wireless communication between raw material handling section and control room involving protocol conversion.

• **Operating Frequency:** 2.4 GHz (Unlicensed band)

• **Maximum distance of wireless communication link:** 800 meters for each machine.