

Locking System Comparison

	Mechanical Padlocks (Current Established Practice)	Electro-mechanical Padlocks and Locking Systems (Latest Pilot Projects)	SecureSeal : Reusable Sealing System (Proposed Solution)
1. <u>Security & Reliability</u>	Easy manipulation via duplicate keys.	Unauthorised operations and attacks possible via programming keys, GSM and GPS jammers.	Keyless operation
2. <u>Tamper Evident:</u>	No evidence of unauthorized operation via duplicate keys.	No evidence of unauthorized operations via programming key or other system hacking tools.	Patented random seal number mechanism provides a tangible proof of tampering
3. <u>Operational Life:</u>	Routine tampering via duplicate keys significantly reduces operational life.	Improper handling and exposure to weather elements significantly reduces operational life.	3-year warranty, mechanism guarantee beyond 50,000 operations, i.e. approx. 10 operations per day for over 13 years.
4. <u>Hardware Responsibility</u>	Transportation lorry crew has no liability towards the padlocks hardware issued to retail outlets by oil companies.	Transportation lorry crew has no liability towards the electronic padlocks or the key updating units.	Being a permanent fixture to tank lorries it remains under full responsibility of vehicle operators and its crews.
5. <u>Operational Costs of Lock:</u>	No operational costs.	High operational costs; includes servers, running of key-updating unit installed on vehicles and regular cellular module costs.	Standalone system, eliminates need for expensive server setups, key-updating unit or cellular module costs.
6. <u>Maintenance Costs:</u>	Mechanical design, no maintenance related costs.	Battery operated, electric padlocks and key fobs require routine battery charging, and timely battery replacements.	Mechanical design, no maintenance related costs.
7. <u>Locking System Dependency:</u>	Works as standalone system.	Require external supporting systems like GPS modules, IT servers and key updating units.	Works as standalone system.
8. <u>Weather Proofing & Handling:</u>	Fully mechanical and weather proof. Does not require precautionary or safe handling.	Key port ducts require proper closure after operation to safeguard electric components against weather elements.	Fully mechanical and weather proof, certified to IPX 6 and IEC 60068 ratings. Does not require precautionary or safe handling.