



CRICKET Grapple Mounted Radiation Detection Systems *Protect Your Facility From Costly Radioactive Contamination*

Introduction

The accidental melting of a radioactive source is a situation no steel / scrap metal facility wants to face. The costs of decontamination clean up, along with lost production revenues during plant shut down, can be catastrophic, not to mention the negative impact on a facilities' public and environmental relations within their community.

Providing "Total Plant Radiation Protection" is the corporate mission of RadComm Systems. Armed with a comprehensive product line of radiation detection systems that inspects for, and detects, radiation at various critical places throughout the plant, RadComm systems are the products of choice for today's metal industry.

CRICKET™ Grapple Mounted Radiation Detection Systems

Overview: Get closer, scan longer

The CRICKET radiation detection system is designed specifically to meet the needs of the scrap, steel and waste industries. Whether at your facilities waterside, or during the general handling of scrap, mounting the CRICKET to a grapple is a key area in which radiation can be detected, detecting sources that may have been missed by other radiation detection systems.

A grapple mounted radiation detection system allows for direct exposure to materials being handled. The CRICKET system scans on a continuous basis and allows for three opportunities to scan throughout the handling process.

Firstly, material is scanned on the surface before the grab is picked up, secondly, the load is scanned for up to 10 seconds while in the grapple, and finally the material is scanned as it falls from the grapple. This means the scrap is being scanned at a closer proximity for a longer time period time than most other radiation detection systems.

A typical system configuration consists of:

- Protective shield and detector assembly
- Battery and transmitter housing
- Control console



Gaining widespread popularity

Wanting to ensure scrap being off loaded from ships and barges is radiation free, CRICKET has gained wide spread popularity as a primary radiation detection in ports and waterside applications. Steel plants and large scrap recyclers have also used CRICKET as a secondary radiation detection device to back-up truck and rail vehicle entrance monitoring systems that are typically used to off load rail cars, load in-feed shredders and loading charge buckets.

The CRICKET is the result of 8 years of development and field experience focused on radiation detection sensitivity while working in a rugged, hostile environment. CRICKET has proven its radiation detection sensitivity and reliability in many certification studies and competitive evaluations, ultimately proving itself in successful operation at over 400 installations throughout Europe and North America.

CRICKET Unique features and benefits

The overall approach to radiation detection using a grapple mounted system is a unique one, looking closer and scanning longer ensures the best possible scenario for detecting radioactive sources in scrap metal. The CRICKET grapple mounted radiation detection systems offers a number of key features available exclusively from RadComm Systems;

Key Features:

1. Ideal for waterside and port radiation detection applications
2. Highest radiation detection capability of any grapple mounted systems.
3. Proven ruggedness and reliability.
4. Fully automatic and easy to use.
5. Easy to install and maintain.
6. Excellent references.
7. Responsive service and support

Ideal for primary bulk scrap metal handling applications: *Ensures scrap metal is radiation free*

- Port/waterside scrap metal unloading and loading.
- Rail car loading and unloading.
- Shredder infeed loading.
- Charge bucket loading.
- CRICKET also provides secondary back-up to entrance vehicle systems (Truck and Rail) that have limited capability due to speed, density and proximity. Many large scrap and steel facilities use CRICKET to provide an extra measure of protection while handling scrap in their yards and in various loading and unloading operations.



Greater sensitivity than any other system

Particularly with the grapple closed and loaded with scrap metal:

Finds deeply buried radioactive sources

- CRICKET has the largest detector surface area available and is the only system to offer 5 detector sizes, fitting most grapples.
- CRICKET has three alarming modes: Surface Scan, Load Analysis - High Sensitivity, and Search modes.
- Surface Scan mode, when grapple is open and traveling over the load provides a continuous level of protection and safety without false alarms
- Load Analysis - High sensitivity mode is activated when the grapple closes on a load of scrap metal and sets an extremely low alarm threshold. The high sensitivity mode is 10 times more sensitive than the Surface Scan mode.
- Search mode allows the operator to use the grapple as a rate meter – search, locate and remove sources safely (similar to a handheld rate meter but easier and safer).
- Measuring scrap in the grapple has the advantage of the detector being closer to the source, less density and a longer look time increasing the likelihood of finding radioactive sources.
- Radcomm has two independent test reports that prove the capability of the system and two customer evaluations in Germany that eventually adopted the system.



Proven ruggedness and reliability

- Radcomm has over the last 8 years developed a rugged, water resistant and reliable design that includes a heavy protective detector shield, shock mounted detector assembly and steel battery housing. Proving the ultimate in reliability, currently there are over 400 systems operating successfully around the world.

Fully automatic, easy to use and operate

Excellent operator acceptance and usage

- CRICKET console provides full color graphics and touch screen display, multi-language capability, with audio and visual alarm notification.
- Fully automatic start-up, testing, surface scanning mode and load analysis high sensitivity mode when grapple is closed and loaded.
- Easy to operate with minimal training required.
- Console can be wirelessly connected to a supervisory office.
- One touch of the console screen and the operator can easily switch to the search mode to locate a radioactive source and safely remove the source.

Easy to install and maintain

No structures to build, site surveys or wires, installation in one day

- Radcomm has simplified the grapple installation assembly with three components:
 1. *Protective shield with detector assembly welded to the grapple crush plate*
 2. *Battery protective case welded to the grapple housing*
 3. *Control console mounted in the cab.*
- Assembly is designed for easy change out of the battery and or detector assembly.
- Battery can be operated for up to 72 hours and the system includes an extra rechargeable battery and charger. Change out facilitated by easily removed large ring pins on front of battery housing.
- CRICKET can be easily transferred to other grapple, however extra protective detector shield and battery case will be required

Satisfied customers who consistently find radioactive material missed by other systems *Proven, field experience*

- Radcomm is the world leader in grapple mounted radiation detection systems, with over 400 installations and customers who proudly voice the capability of the system to find radioactive material.
- Radcomm CRICKET customers include Nucor, Gerdau Ameristeel, North American Stainless, David Joseph, ELG, Conifer, Acerinox, Capricorn, Outokumpo, Hugo Neu, BSW, Cronimet
- Accepted as the "Industry Gold Standard" for grapple mounted systems.

Responsive technical support and service *No interruption in scrap flow, minimal downtime*

- Radcomm has dedicated service technicians that work solely in the steel and scrap metals recycling industries
- Initially a telephone conversation can solve most problems and provide technical support, otherwise internet and telephone modem support
- Radcomm has full parts inventory readily available, worldwide
- Given CRICKET's modular design, parts change out is fast and simple
- Service technicians are available to make service calls as required.

Conclusion

Committed to the long term, the future of radiation detection for the steel industry.

In summary, RadComm processes the core competencies, experience, technology, service and people to become the future of radiation detection technology for the steel industry. Flexibility, versatility and the ability to customize radiation detection solutions for specific customer applications are what make RadComm a unique supplier to the industry.

Over the past fourteen years, RadComm has proven that it's radiation detection systems work, with satisfied customers and successful installations worldwide. Leading edge technology, outstanding service and dedicated personnel, along with a new state-of-the-art facility, will catapult RadComm into the future of radiation detection, illustrating it's commitment to becoming the prime supplier of radiation detection technology and solutions to the steel industry.

