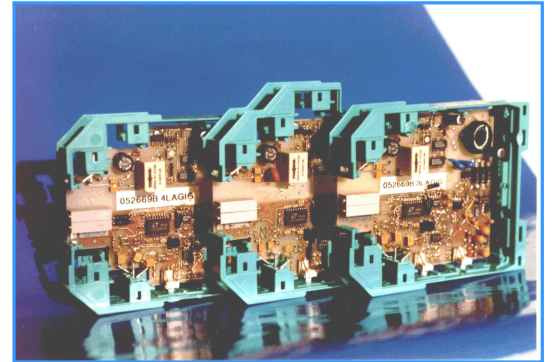


## Intrinsic Safety for MSR Appliance

### Overview

Intrinsic safety plays an important roll in the chemical and petrochemical industry. On these grounds measuring and controlling devices are often requested having attained the approval for devices intended to use in hazardous areas.



MESCO Engineering develops on your behalf products which correspond to the world wide intrinsic safety standards. Together with our experience and know how we support you during the design phase of performance specification by preparing feasibility studies and we can also implement complete development of electrical apparatus for potentially explosive atmospheres.

Through implementation of a feasibility study production costs, position ratio and heating ratio in addition to the expected specifications will be ascertained before the development phase. As a result the development risk is reduced to a minimum.

We work jointly with specialists for an approval in accordance with ATEX 100a or also in accordance with FM, CSA amongst others, whilst starting with the feasibility study the development results are tested to the standards. As a consequence the approval time is reduced to a minimum and additional re-design phases are avoided.

### Norms

- ATEX 100a: Directive 94/9/EG of the European Union
- EN50014: Electrical apparatus for potentially explosive atmospheres: general requirements
- EN50019: Increased safety "e"
- EN50020: Intrinsic safety "i"
- EN50028: Encapsulation "m"

### Power Spectrum

- Advice assisting development for "i", "e" and "m" types of protection
- Feasibility studies
- Cost analysis of corresponding products; substituting cost intensive measures of intrinsic safety by using good value alternatives and capitalising on the advantages of SMD technology
- Development of electrical apparatus for potentially explosive atmospheres in addition to the development of classified production facilities in "i", "e" and "m" types of protection
- Development of intrinsically safe field bus appliances, corresponding to the FISCO model of the PTB Braunschweig (PTB area PTB W53) e.g. PROFIBUS PA and Foundation Fieldbus
- Implementation of protection equivalent circuit diagram
- Approval assistance

