Automatic Sampling System
Fast, Efficient & Clean Sampling System

The Provac Automatic Sampling System is a unit for taking high quality metal samples at a fixed location. Can be used with either expendable probes for Argon Protected Sampling or with Classic Lollipop Samplers.

System Capabilities

Argon Protected Sampling
Ensures a solid sample of the melt with no diluting from slag caps. The sample surface and filling of the sample is also improved. Chemical analysis of the sample is more representative of the melt compared to a standard sample taken with a probe with a metallic slag cap.

The control of Argon gas flow during immersion, together with the vacuum to fill the sample is performed by a metal sensor inside the lance. This sensor ensures that the sampler is fully immersed under the slag before the metal sample is taken. Therefore there is no risk of slag inclusions in the sample.

The System is easy to use as it is semi-automatic with the metal sensor controlling the temperature measurement and sampling sequence. Lances and mechanisms are customized to fit the specific requirements at the sampling location.

Classic Lollipop Sampling
In built sensor ensures sample is always taken when fully immersed in the metal. Lances and mechanisms are customized to fit the specific requirements at the sampling location.

Sampler type must be decided before ordering. However a system designed for classic samplers can always be upgraded to argon protected sampling at a later stage.

A system designed for argon protected sampling can also be used for classic lollipop samplers.
Technical Information
AGELLIS ALS

System Overview

Technical Information

Options

Slag thickness
The standard steel sensor electronics can be upgraded with a slag surface detection unit. This together with a splash-free temperature probe, new software and additional hardware makes it possible to measure the slag thickness. Beside the slag thickness, a normal readout of the temperature is obtained. Repetitive accuracy is 10mm or better.

Bath level
The bath level can be measured with high accuracy using our sensor-equipped temperature lance. The hardware and software is upgraded and for maximum accuracy and repeatability, splash free temperature probes are recommended. Besides the bath level, a normal readout of the temperature is obtained.

System Description and Options

Electrical: According to local specifications.
Argon gas pressure: Min/Max - 6/10 bar
Argon gas flow: Min - depending on application
Max - 1350 l/min (during immersion)

Air pressure: Min/Max - 6/10 bar
Air flow: Min - 900 l/min (during sampling)
Safety standard: Complies with known safety standards

User Benefits & Advantages

Easy & fast system – Fully automated procedure that takes seconds.
Exact sample position – Always takes sample from correct depth.
Pure metal sample every time – System prevents contamination.
Repeatable results – Good sample irrespective of operator.
Multiple lances – Different probe types sample & measure in sequence.
Optimizes production process – Aids efficient decision making.
Cost effective – Excellent return on investment.

System types

Flexible systems Normally the standard system is permanently mounted on a stand. Other types of installations can of course be made to save space or to use the sampling system in a more flexible way. Our engineers will study your equipment and available area in your plant to guarantee that your sampling system installation will be the best possible.

Swing-arm The system is mounted on a swing-arm that moves the equipment into position during the sampling sequence.

Tilt The system is tilted to the position over the ladle during the sampling sequence.

EAF sampling A flexible stand-alone system with one or two lances has been designed for sampling in electric arc furnaces.

Converter sampling A unique equipment has been designed for taking samples in, for example, AOD-converters. Two separate swing arms take the sample and measure the temperature.

Telescopic lances Where space is limited in which to install conventional lance drive mechanisms, we can offer a unique solution to the problem. A lance drive mechanism with telescopic lances can be the answer. This system gives twice the stroke length compared to a standard system with the same overall length of the lance drive mechanism.

Agellis follows a policy of continual improvement of design and we must therefore reserve the right to supply equipment differing in detail from that described herein.

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