Operating Procedure Manual

Title Test Parameters for Minnox Guarantee

1.0 Purpose

1.1 The purpose of this procedure is to document the test parameters that are to be used to determine the emissions level of the Minnox burner.

2.0 Equipment

2.1 The dilution of the products of combustion by the process air stream will be determined by CO_2 and O_2 measurements made with Non-Dispersive Infra-Red analyzers. If both measurements cannot be made, CO_2 concentration is the minimum criteria for establishing dilution. [1,2]

2.2 Carbon Monoxide concentrations will be measured with an NDIR analyzer with a low range cell, typically 0-50 ppm, full scale, or less. [2]

2.3 Oxides of Nitrogen concentrations will be measured with a chemiluminescent analyzer, with a low range, full scale, of 0-10 ppm or less. [3]

2.4 Sampling lines, at minimum, should consist of a stainless steel probe, ice bath sample chiller, teflon tubing, vacuum pump for mildly corrosive atmospheres, and some sort of particulate filter.

3.0 Sampling

3.1 Sampling points must be well beyond the combustion reaction, at a point in the duct or stack where the flue gases are well mixed. The sample must be cooled below the dew point so that measurements are taken on a dry volume basis.

3.2 After each sample taken during the combustion process, the ambient concentration should be measured, and this amount should be subtracted from the combustion measurement prior to correction. All burner emissions will be reported on a 3% O_2 dry basis.

3.3 Grab bag sampling for Gas Chromatography and Flame Ionization Detection will be an acceptable method of determining CO and CO_2. The Chemiluminescent method is the only acceptable method presented in the Code of Federal Regulations, 40, part 60, Appendix A, Method 7, for determining NO_x emissions from stationary sources at this level of concentration and detection.

4.0 Notes

1 CFR 40, Method 3A
2 CFR 40, Method 6C
3 CFR 40, Method 7E

Offered By:
Power Equipment Company
2011 Williamsburg Road
Richmond, Virginia 23231
Phone (804) 236-3800
Fax (804) 236-3882

www.peconet.com