IPLOM

Busalla, 31/01/2019

Prot. n. qsa_AIA_2019005

Spett.li

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Oggetto: **IPLOM-GE-BUSALLA – RISCONTRO – Trasmissione documentazione richiesta dal Gruppo Ispettivo in occasione del controllo ordinario AIA eseguito in data 11-12/12/2018**

Rif: **Decreto Min. Dec. 0000048 del 22/02/2018 – prot. DVA-2018-0006000 del 13/03/2018 di riesame complessivo dell'autorizzazione Autorizzazione Integrata Ambientale rilasciata con decreto n° DEC-2010-0001001 del 28/12/2010 per l'esercizio della raffineria IPLOM S.p.A. Busalla – GE**
Pubblicazione G.U. il 17 Marzo 2018
Verbale di Visita Ispettiva Ordinaria 11-12/12/2018

Con riferimento alla richiesta di documentazione pervenuta al Gestore in occasione della visita ispettiva ordinaria del Gruppo Ispettivo a margine richiamata, si trasmette in allegato documentazione relativa al termine di febbraio 2019 e alla specifica tecnica degli analizzatori di TOC su trattamento acque.
Per quanto riguarda le altre richieste si informa che il Gestore ha provveduto a programmare verifiche di QAL2 sugli analizzatori delle emissioni in atmosfera, come da nota Prot. n. qsa_AIA_2019005 del 30/01/2019, a richiedere al fornitore l'adeguamento dei RdP alle emissioni con indicazione dei dati di combustibile in alimento ai forni, a revisionare il manuale di gestione SME che verrà inviato non appena completato l'aggiornamento e a programmare il collaudo dei sistemi di abbattimento delle emissioni odorigene installati sui serbatoi di VN.
Sarà cura del Gestore dare aggiornamento in merito e provvedere inoltre all'invio della documentazione relativa alle richieste aventi come termine giugno 2019 come da verbale di visita ispettiva.

L'occasione è gradita per porgere cordiali saluti.

IPLOM S.p.A.
Il Gestore
Ing. Vincenzo COLUMB

Elenco allegati:
- *Allegato 1 "Caratteristiche inceneritore F1402"*
- *Allegato 2 "Specifica tecnica TOC acque"*

IPLOM

“Caratteristiche forno inceneritore F1402”

Busalla, 24 gennaio 2019

S.p.A. a socio unico - Capitale Sociale Euro 84.000.000 i.v.
R.E.A. 258932 - R.I. e C.F. 02242120109 - P.IVA 11616440159 - Meccanografico: GE031102
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Raffineria: 16012 BUSALLA (GE) Via Boccarda, 2 - Tel. 010 96231
Terminale GE-Multedo: Via Ronchi, 2 - Tel. 010 6986597

IPLOM

Introduzione

Al fine di raggiungere un'efficienza di recupero zolfo maggiore del 99% i fumi provenienti dall'impianto Claus vengono trattati (riduzione dei composti solforati con idrogeno) nella successiva sezione T.G.T. a cui fanno seguito il raffreddamento attraverso lavaggio con acqua ed il trattamento in colonna di assorbimento con ammina; il gas di processo addolcito effluente dall'assorbitore e contenente ancora tracce di H_2S da abbattere prima dell'immissione in atmosfera è inviato all'inceneritore F1402.

Descrizione F1402

L'inceneritore termico F1402 è verticale, a tiraggio naturale; la combustione del gas contenente H_2S è supportata da gas naturale con possibilità di impiegare gas di raffineria ed avviene ad una temperatura non inferiore a 650°C.

La portata del gas combustibile e dell'aria comburente sono controllate dalla temperatura della camera di combustione; gli allarmi di alta e bassa temperatura di combustione (rispettivamente 910°C e 625°C) sono visualizzabili in sala controllo unitamente all'allarme di bassa concentrazione di O_2 nei fumi.

Il bruciatore all'interno del forno è installato in posizione orizzontale e viene acceso tramite un pilota; la sequenza di accensione del bruciatore viene eseguita dall'operatore agendo al pannello locale dedicato installato vicino al bruciatore stesso.

La presenza della fiamma nella camera di combustione viene rilevata da una fotocellula.
A seguito della combustione, i fumi vengono infine scaricati in atmosfera a 40 m dal suolo tramite camino.

Allegati

In allegato il disegno tecnico N°A1-0410 dell'unità.

7010 TOC Analyzer

Continuous monitoring of total organic carbon

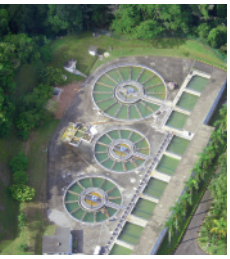
Metrohm
Process Analytics

Total organic carbon (TOC)

02

Organic compounds – present in almost all types of water ...

Organic compounds are found in almost all types of water – from natural and treated drinking water to process water, cooling water, and water used in pharmaceuticals and food production.



... and a challenge in many industrial processes

Too much organic contamination in the water interferes with many industrial processes. For example, an excess of organic matter can foster microbiological growth or, when disinfecting drinking water, encourage the presence of undesirable byproducts. On the other hand, there are numerous processes in the chemical and galvanic industries in which water is mixed with organic additives. In order to control and monitor these processes, it is important to measure the amount of organic substances in the water.

TOC – an important sum parameter

Given the huge numbers of organic compounds in water, it is practically impossible to identify and measure each one individually. Instead of analyzing individual substances, a fast and precise way to rate water quality is to measure sum parameters – this is especially helpful in the case of online monitoring. Measuring the total organic carbon (TOC) is particularly important for the evaluation of the total organic contents. The advantages of TOC analysis include the high levels of accuracy and precision that can be achieved, even with small sample amounts, plus the ease with which the process can be automated.







TOC applications

- In many industry sectors, measuring and checking the TOC is an essential factor in making processes more efficient and reducing costs as a result.
- Monitoring the TOC is a key part of the correct treatment of wastewater and is also crucial in ensuring compliance with the organic load limits involved in wastewater treatment.
- In the field of power plant analysis, the TOC value provides information on the quality of the boiler feed water. Following the purification of condensates, the TOC value is used to determine whether the condensates can be fed back into the water-steam circuit.
- Run-off and storm water from chemical and petrochemical plants as well as airports can contain high concentrations of organic compounds. Monitoring the TOC value at collection points makes it easier to decide whether the streams require post-treatment or whether they can be fed into the outfall or the communal sewage system.

Industry sectors

- Chemicals
- Pharmaceuticals
- Food & beverage
- Automotive
- Oil & gas
- Power & energy
- Petrochemicals
- Pulp & paper
- Airports
- Environmental monitoring

Sample types

- Drinking water
- Surface water
- Process control
- Boiler feed water/condensate
- Cooling water
- Run-off/storm water
- Wastewater

Safe and reliable online TOC measurements

Measuring TOC continuously online is the perfect solution for monitoring contamination and discharges. The 7010 TOC Analyzer measures total organic carbon in liquid samples using the method of UV persulfate oxidation with subsequent carbon dioxide detection by non-dispersive infrared absorption (NDIR). The analyzer can measure TOC in liquid samples ranging from 0–5 mg/L to 20,000 mg/L. The method conforms to EPA, DIN, CE, ASTM, and NAMUR regulations as well as meeting the requirements of ISO and EN directives.

Digital flowmeter

Unlike traditional analyzers where the flow is controlled by a glass tube rotameter, the carrier gas flow is controlled digitally and is displayed in cm^3/min. The flow is monitored and in the case of an abnormal value such as a line blockage, the analyzer stops automatically and displays a «low carrier flow» message.

Dual compartment enclosure

The analyzer consists of two separate housing compartments in order to separate the electronics from the wet part.

Valve-free sample line

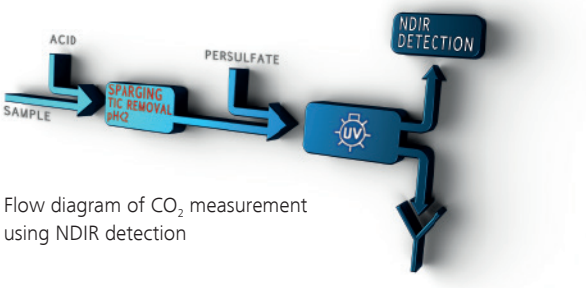
Samples are taken and reagents are added via the peristaltic pumps eliminating valves which risk being blocked. The autoclean, autocalibration, and autovalidation functions guarantee correct, reliable values that can be reproduced at any time without the need for manual intervention.

Safe operation in case of sample loss

The fast loop reservoir has a floating level sensor. If no sample reaches the reservoir for more than a preset time, the analyzer switches automatically to standby mode. As soon as the sample flow restarts, the analyzer switches back to the analysis cycle automatically. Air bubbles are removed in the reservoir before the sample enters the analyzer.

Analysis process

The sample first is acidified and then sparged to remove inorganic carbon. The remaining liquid is mixed with sodium persulfate and digested by two high-performance reactors. The resulting CO_2 is then stripped from the liquid and, after drying, its concentration is measured by a NDIR analyzer.



Flow diagram of CO_2 measurement using NDIR detection

Integrated gas management

An internal air compressor produces the carrier gas for the oxidation and detection stages. The air is purified using an internal soda lime filter which means that there is no need for external air treatment or a compressed air supply, as in traditional analyzers.

Automatic ZEROGAS checks

The ZEROGAS value is expressed in ppm and specifies the residual CO_2 concentration value in the carrier gas (ambient air filtered through a soda lime filter). During a ZEROGAS cycle, the pumps and UV lamps are switched off and the carrier gas passes through all the wet cells to the IR detector. The detected CO_2 concentration is stored in the analyzer as the ZEROGAS value. A ZEROGAS cycle can be started manually or automatically at a time and interval selected by the operator. If the ZEROGAS value exceeds a certain preset limit, the alarm «ZEROGAS too high» will be activated and the analyzer will stop.

Autoclean

This function uses a dedicated peristaltic pump to clean the liquid lines of the analyzer, the sample line, and the external reservoir.

Separate lines for stripping gas and carrier gas

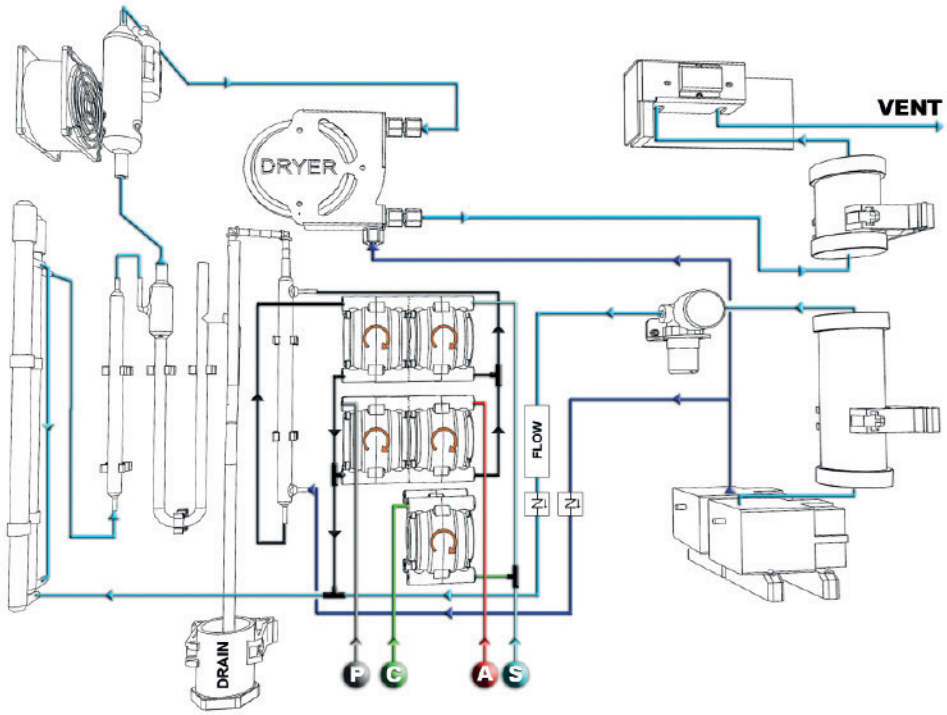
There are two separate gas lines, each with its own compressor. One is intended for the stripping gas for the TIC (total inorganic carbon) and one for the carrier gas (automatically monitored by a digital flowmeter).

Materials used in the analyzer

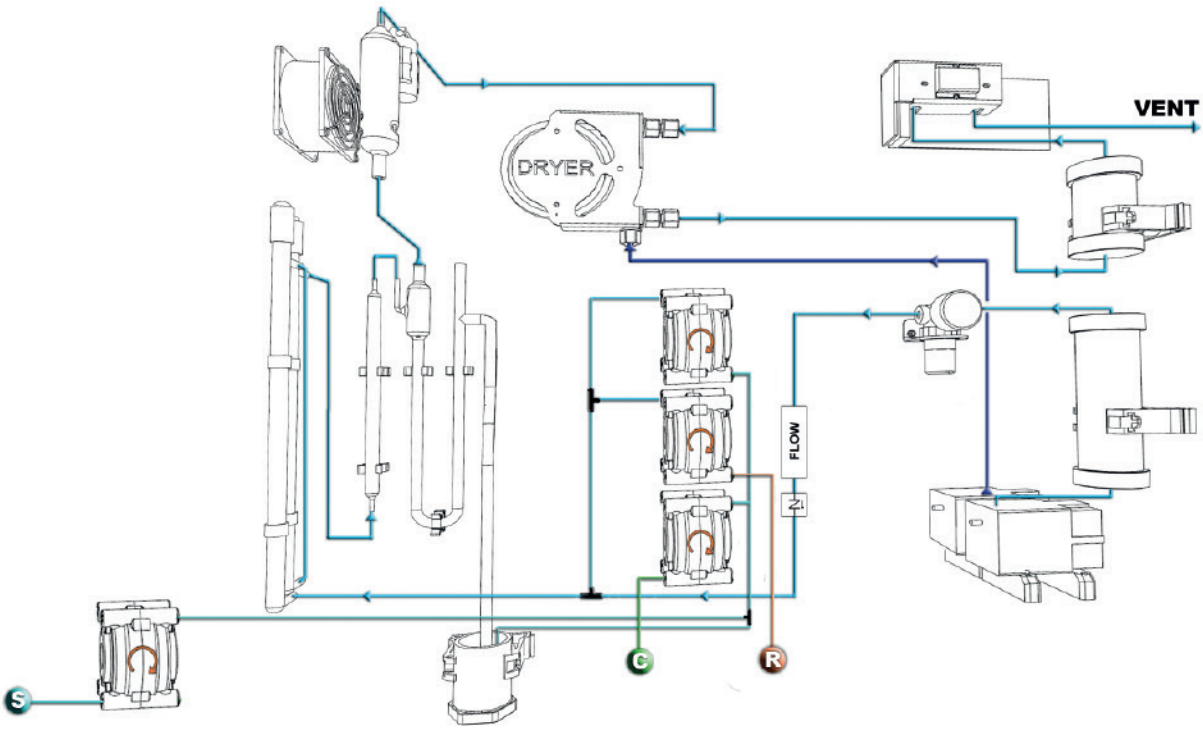
All materials used are chosen for their long life and reliability. The design uses the minimum number of fittings. All of the materials used are resistant to the corrosive liquids used during operation.

TOC or TC

The 7010 TOC Analyzer is also available as a total carbon (TC) analyzer. Here the step of sparging the acidified sample is omitted. Along with a high volume external pump, this offers faster response times when the total inorganic carbon (TIC) in the sample is considered insignificant.



- SODIUM PERSULFATE
- CLEANING
- ACID
- SAMPLE



- MIXED ACID/PERSULFATE
- CLEANING
- SAMPLE

Flow diagrams of the 7010 TOC Analyzer configured for TOC and TC

Simple operation – full control

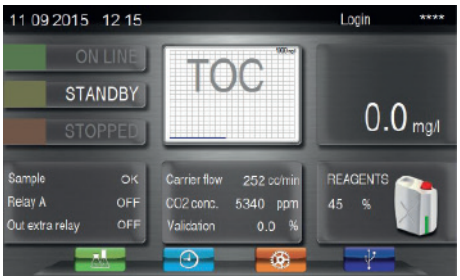
The user interface is a touchscreen located on the front of the analyzer. All output/input data, status information, alarms, and fault conditions are shown. Simply pressing the touchscreen buttons gives access to commands and settings; access to the system configuration and timings is protected by a password.

Main screen

During normal operation, the main screen shows a graphical display of the trend in measured concentration. Buttons are provided to select the operating modes and there are indicators of statuses and alarms.

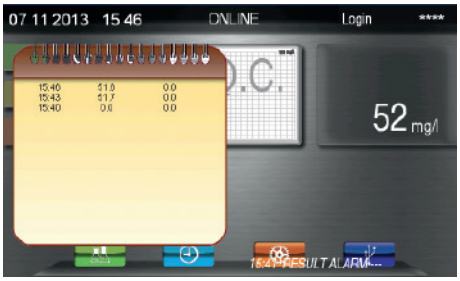
Main screen with process values

Simply press on the main screen to obtain the status of analyzer, sample, and relay; carrier gas flow, reagent fill levels, and measured CO_2 concentrations, and last validation result. This provides all the information needed to check the analyzer is operating correctly.



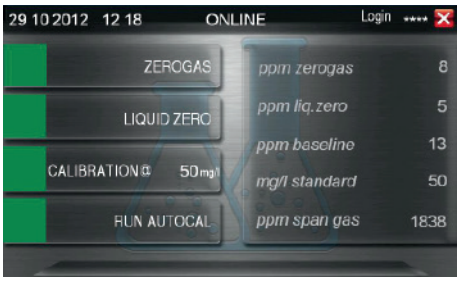
Integrated data logger

Tapping on the result graph opens a notepad where the day's results are recorded at 3-minute intervals. Results for the last 30 days are saved in the instrument at 15-minute intervals and can be downloaded onto a USB stick at any time for evaluation on a PC.



Calibration page

After logging into Advanced mode, the user can access the carrier gas (ZEROGAS), liquid zero, and calibration functions. An autocalibration cycle can be activated according to the times and intervals set by the user on the timing page.



Timing page

The timing page can also be called up in Advanced mode. This page can be used to set timed automatic checks on the ZEROGAS, control the extra relay, set conditioning parameters, and schedule the selected automatic function.

Specifications and accessories

Analyte	Total Organic Carbon (TOC), Total Carbon (TC)
Method	For TOC measurements, inorganic carbon is removed by acidification and sparging; this is followed by UV-promoted persulfate oxidation. This process oxidizes the total organic carbon into carbon dioxide which is measured in a nondispersive infrared (NDIR) analyzer. For TC measurements, the sparging step is omitted.
Range	0–5 mg/L to 20,000 mg/L
Measurement type	Continuous
Lower determination limit	0.2 mg/L
Accuracy	± 2% of full scale nondiluted, ± 4% of full scale diluted ranges
Response time	From 6 minutes, depending on range
Ambient temperature	5–40 °C
Sample temperature	2–70 °C
Sample inlet pressure	Pressureless from overflow vessel (Fast Loop Reservoir)
User interface	Color touchscreen
Data logger	Integrated, data download to USB stick
Size	760 × 600 × 210 mm
Weight	37 kg (approx. depending on range)
Power supply	115 or 230 VAC 50/60 Hz, 350 VA (115 VAC), 250 VA (230 VAC)
Carrier gas	Air purifier integrated, supplied by an internal compressor. N_2 or CO_2 free air supply can be used as an option
Reagents	Phosphoric acid and sodium persulfate (approximately 10 L/month for continuous operation)
Analog outputs	2 × 4–20 mA outputs for measured data
Digital output	RS 485
Alarms	2 SPDT contacts. Relay A is programmable – online, offline, loss of sample, result alarm, validation alarm, reagent alarm, calibration alarm. Relay B is for the instrument fault alarm
Extra relay	Programmable for external operations
Digital input	Remote start/stop
Autoclean, autocalibration, autovalidation functions	Can be selected using the dedicated peristaltic pump
Dual channel	Dual channel integrated
Dual range (low/high)	Switches sample to an external dilutor for a higher range once a set-point is passed
Factor	Result multiplication factor, e.g., for converting TOC to equivalent COD value
Protection class	IP54
Conformity	EN 610004-2, EN 610004-4, C 46-022, EN 55022, EN 61326 (electromagnetic compatibility)

Accessories available

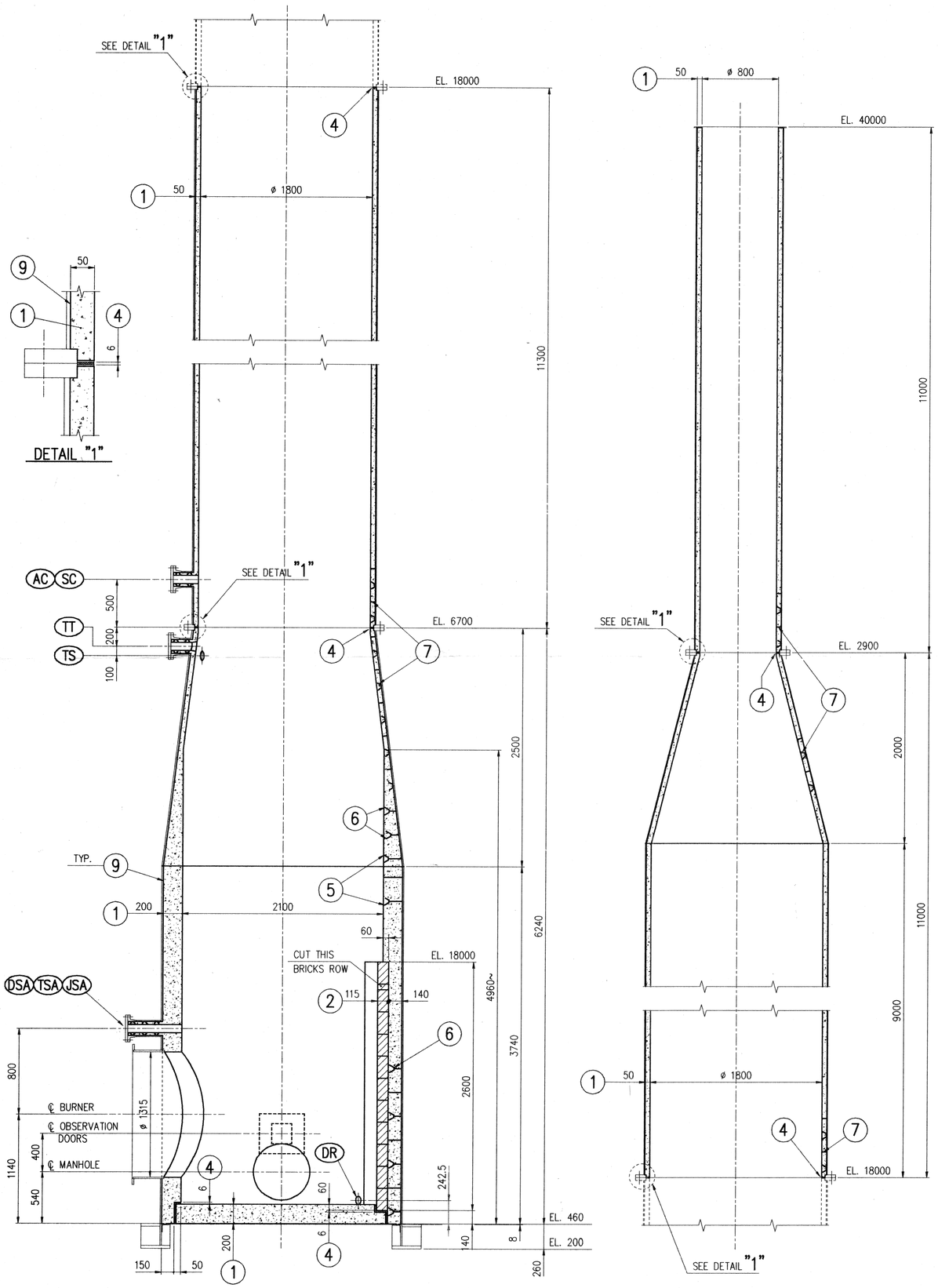
Fast loop reservoir	Maintains a constant sample flow and switches analyzer to standby in case of insufficient flow. As soon as the sample flow restarts, the measurement is resumed.
External diluters	Options of 2× to 100× dilution of one or two sample streams using 1 motor with dual pump heads or 2 motors with single pump head
Filtration unit	Self-cleaning, at user selectable intervals and cleaning period

Separate datasheets are available for the accessories mentioned above.

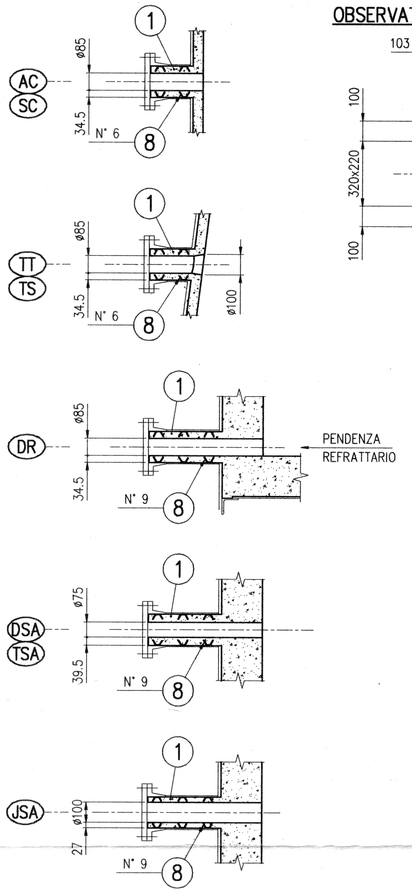
If you need any assistance when configuring the 7010 TOC Analyzer, please do not hesitate to contact us.

Subject to modifications
Designed by Ecknauer+Schoch ASW, printed in Switzerland at Metrohm AG, CH-9100 Herisau
8.000.5113EN – 2016-04

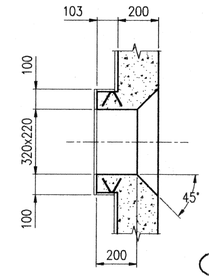
Metrohm Process Analytics



INCINERATOR ELEVATION

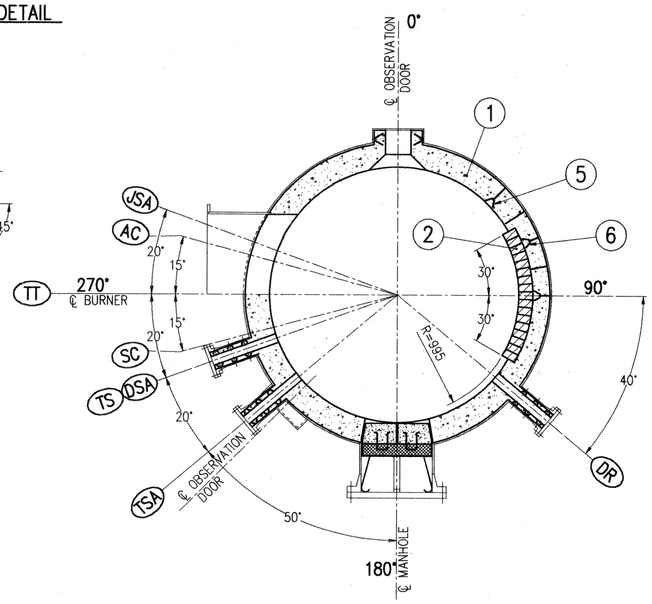


INSTRUMENTS CONNECTIONS DETAIL
(SCALE 1:15)



OBSERVATION DOOR DETAIL

MANHOLE DETAIL
(SCALE 1:15)



PLAN ORIENTATION

11				
10				
9	PROTECTIVE PAINT (3 COATS)	SODIUM SILICATE	300	
8	ANCHORS "V" L=30	AISI 310		60
7	ANCHORS "V" L=45	AISI 310		6410
6	ANCHORS "Y" L=125	AISI 310		120
5	ANCHORS "Y" L=185	AISI 310		550
4	CERAMIC FIBRE 1/2"	d. 128 GIBFIL 1–1420°		2
3	CERAMIC FIBRE 1"	d. 128 GIBFIL 1–1420°		2
2	SHAPED INSULATING BRICKS 230x115x65/60	ATLAS+A		204
1	INSULATING CASTABLE	K 26/B	26000	
Pos. Item	Denominazione Denomination	Materiale Material	Kg Weight	N. No.

Comm. Job 1.1204/97 — Cliente Customer KTI 05.32711

Sostituisce il n° — Sostituito dal n° — TREZZANO S/N — MILANO

SCALA	FIRMA		DATA
1:25	Disegnato	ERRECI	04–06–97
	Controllato	SIRC	04–06–97

TITOLO: INCINERATOR F–1402 — REFRACTORY LINING

N° DISEGNO: A1 - 0410

Indice Revisioni: 0

IPLOM S.P.A.
RAFFINERIA DI BUSALLA–GENOVA

REV.	DESCRIPTION	DWN	REV.	S.E.	PROC. ENG.	P.E.	APP.	DATE
0	ISSUE FOR APPROVAL	G.R.						4–6 1997

INTERNAL REVISION: A
CAD CODE: –
PROJ. N: 05.32711

KTI — A Mannesmann Company

INCINERATOR
ITEM F–1402
REFRACTORY LINING

SCALE	ITEM	SIZE	AREA	WORK NUMBER	UNIT	SECT.	SEQUENCE	REV.	PAGE	OF
1 : 25	D	D	5	32711	14	15	401	00	001	001