New Instruments and
Research for Analysis

NIRA AUTOMATIC AIR RECIRCULATION CONTROL

MULTI-LINE AUTOMATIC AIR RECIRCULATION CONTROL FOR ENERGY SAVING AND FLOW RATE REDUCTION FOR AIR TREATING SYSTEMS

Through our LEL monitoring systems and **"automatic air recirculation control"** systems, we are able to drastically reduce (between 40% to 60%) the flow rate in discharge and increase (between 30% to 50%) the average solvent concentration in evacuation from any laminating, coating, flexo and gravure press machines.

NIRA Products and Services

NIRA supplies the following services and products:

- > ***Free consultations and plant inspections.***
- > ***Studies of the ventilation systems.***
- > ***Construction drawings*** *for mechanical adjustments on the ventilation systems.*
- > ***Mechanicals supply*** *to create the automatic air recirculation systems.*
- > ***Flame Ionization and Infrared LEL monitoring systems.***
- > ***Automatic air recirculation control systems.***
- > ***Detailed quotations,*** *energy saving estimations and investment payback time.*
- > ***Contract maintenance.***

BENEFITS

- > ***More safety inside the plant by monitoring and keeping under control the solvent concentrations.***
- > ***Saving on electricity, fuel oil or natural gas consumption on the air heating systems.***
- > ***Lower investments on air treating system (RSP or RTO).***
- > ***Lower residual solvent on laminated, coated or printed flexible materials.***

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INTRODUCTION

Increasing energy and raw material costs, as well as a growing sensitivity toward emission controls, are pushing all major printing companies to explore new technologies designed to drastically reduce costs associated with air treating systems and energy saving. Some of these expensive investments on air treating systems and their running cost, are partially related to the quantity of the air to be treated and its average solvent concentration.

NIRA AUTOMATIC AIR RECIRCULATION CONTROL SYSTEM

Through our LEL monitoring systems and "automatic air recirculation control" systems, we are able to drastically reduce (between 40 to 60%) the flow rate in discharge and increase (between 30 to 50%) the average solvent concentration in evacuation from any laminating, coating, flexo and gravure press machines.

ENERGY SAVING THROUGH AUTOMATIC AIR RECIRCULATION SYSTEM

During any exsiccation process a lot of energy is required. Through our automatic air recirculation control systems we are able to drastically reduce 30 to 40% of your actual energy consumption (electricity, fuel oil or natural gas) associated with the air heating systems.

NIRA LEL MONITORING SYSTEMS

The flammable properties of the solvents and the high temperatures inside the ventilation systems of any laminating, coating, flexo or gravure press machines, can create dangerous risks of explosion. In order to avoid these dangerous conditions, the solvent concentration inside the ventilation system must be checked by a LEL monitoring system and must be kept below then the 50% of its Lower Explosion Level **(UNI EN 1539:2009).**
A LEL Monitoring System is an analytical instrument able to check and keep under control the solvent concentration inside any drying station during any production process.

CAN ANY TYPE OF MACHINE BE RETROFITTED?

The answer to this question is yes; any laminating, coating, flexo or gravure press machines can be retrofitted, but in some cases, some mechanical adjustment on their ventilation systems could be required. In most of the cases, a technical inspection made by our specialized technicians will be required, but after these audits, we will be able to supply some import information like: the total investment cost, the obtainable flow rate reduction in discharge, the obtainable yearly energy saving and the total project investment payback time.

CONCLUSIONS

Any penny saved is a penny earned.
Consideration the constant energy and raw material cost increasing, it's very easy to understand the out coming benefits obtainable through our services and systems.
Saving is our future; lower our production cost will increase our margin profit and it will help our companies to become more competitive on the domestic and international market.

TECHNICAL SPECIFICATIONS

CABINET	*Control pulpit*
ENVIRONMENTAL WORKING TEMPERATURE	*+ 5 + 40°C*
COMMUNICATION	*Modbus on RS485*
VISUALIZATION	*Touch Screen 15"*
PAGES	*Synoptic, trends and alarms*
POWER SUPPLY	*230 Vac, 50/60 Hz, 500VA*
DIMENSIONS	*600x1100x1900 (L x W x H)*
WEIGHT	*150 Kg*

N.I.R.A.
NEW INSTRUMENTS and RESEARCH for ANALYSIS s.r.l.
Head Office: Via Locatelli, 113 - 20853 Biassono (MB) - Italy
Phone: +39 039.24.97.856 - Fax +39 039.24.90.049 e-mail: info@nirainstruments.it