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MANUFACTURER'S QUALITY

RECORD BOOK

acc. to 98/37/CE Directive

Rotating mixer 1400 mm dia.

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PREPARED BY

DATE

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IDENTIFICATION DATA

<u>Manufacturer</u>	OFFICINE SASPE GROUP S.r.l.
<u>Customer</u>	DESMET BALLESTRA S.p.A.
<u>Purchaser Order Nr.</u>	121266
<u>Job Nr.</u>	2F11
<u>Item</u>	65MX1
<u>Model</u>	MIXER 1400 mm Diameter
<u>Year of construction</u>	2012
<u>Serial Number</u>	1916-1

1. FIELD OF APPLICATION

For the purpose of this Directive , the Rotating Mixer is a “machinery” acc. to Charper I § 2.a).

2. ESSENTIAL HEALTH AND SAFETY REQUIREMENTS

2.1 GENERAL REMARKS (98/37/CE Directive – Annex I)

For the purposes of this Annex ‘machinery’ means either ‘machinery’ or ‘safety component’ as defined in Article 1(2).

PRELIMINARY OBSERVATIONS

**The essential health and safety requirements have been grouped according to the hazards which they cover.
The essential health and safety requirements laid down in this Directive are mandatory.
The manufacturer is under an obligation to assess the hazards in order to identify all of those which apply to his machine; he must then design and construct it taking account of his assessment.
However, taking into account the state of the art, it may not be possible to meet the objectives set by them.
In this case, the machinery must as far as possible be designed and constructed with the purpose of approaching those objectives.**

DEFINITIONS

For the purpose of this Directive:

- 1. ‘danger zone’ means any zone within and/or around machinery in which an exposed person is subject to a risk to his health or safety;**
- 2. ‘exposed person’ means any person wholly or partially in a danger zone;**
- 3. ‘operator’ means the person or persons given the task of installing, operating, adjusting, maintaining, cleaning, repairing or transporting machinery.**

2.2 CHECK LIST

The obligations laid down by the essential health and safety requirements apply only when the corresponding hazard exists for the machinery in question when it is used under the conditions foreseen by the manufacturer.

In any event, requirements acc. to Annex I apply to all machinery covered by this Directive. Machinery presents a series of hazards which may be indicated under more than one heading in this Annex.

1.1.2.	PRINCIPLES OF SAFETY INTEGRATION	Acc. to ESR	NOTES
a)	Machinery must be so constructed that it is fitted for its function, and can be adjusted and maintained without putting persons at risk when these operations are carried out under the conditions foreseen by the manufacturer.	YES	The aim of measures taken must be to eliminate any risk of accident throughout the foreseeable lifetime of the machinery, including the phases of assembly and dismantling, even where risks of accident arise from foreseeable abnormal situations.
b)	In selecting the most appropriate methods, the manufacturer must apply the following principles, in the order given on "NOTES".	YES	<ul style="list-style-type: none"> — eliminate or reduce risks as far as possible (inherently safe machinery design and construction), — take the necessary protection measures in relation to risks that cannot be eliminated, — inform users of the residual risks due to any shortcomings of the protection measures adopted, indicate whether any particular training is required and specify any need to provide personal protection equipment.
c)	When designing and constructing machinery, and when drafting the instructions, the manufacturer must envisage not only the normal use of the machinery but also uses which could reasonably be expected.	YES	<p>The machinery must be designed to prevent abnormal use if such use would engender a risk. In other cases the instructions must draw the user's attention to ways</p> <ul style="list-style-type: none"> — which experience has shown might occur — in which the machinery should not be used.
d)	Under the intended conditions of use, the discomfort, fatigue and psychological stress faced by the operator must be reduced to the minimum possible taking ergonomic principles into account.	YES	
e)	When designing and constructing machinery, the manufacturer must take account of the constraints to which the operator is subject as a result of the necessary or foreseeable use of personal protection equipment (such as footwear, gloves, etc.).	YES	
f)	Machinery must be supplied with all the essential special equipment and accessories to enable it to be adjusted, maintained and used without risk.	YES	
1.1.3.	MATERIALS AND PRODUCTS	Acc.to ESR	NOTES
	The materials used to construct machinery or products used and created during its use must not endanger exposed persons' safety or health.	YES	In particular, where fluids are used, machinery must be designed and constructed for use without risks due to filling, use, recovery or draining.
1.1.4.	LIGHTING		
	<p>The manufacturer must supply integral lighting suitable for the operations concerned where its lack is likely to cause a risk despite ambient lighting of normal intensity. The manufacturer must ensure that there is no area of shadow likely to cause nuisance, that there is no irritating dazzle and that there are no dangerous stroboscopic effects due to the lighting provided by the manufacturer.</p>	YES	Internal parts requiring frequent inspection, and adjustment and maintenance areas, must be provided with appropriate lighting.
1.1.5.	DESIGN OF MACHINERY TO FACILITATE ITS HANDLING		
	<p>Machinery or each component part thereof must:</p> <ul style="list-style-type: none"> — be capable of being handled safely, — be packaged or designed so that it can be stored safely and without damage (e.g. adequate stability, special supports, etc.). <p>Where the weight, size or shape of machinery or its various component parts prevents them from being moved by hand, the machinery or each component part must:</p> <ul style="list-style-type: none"> — either be fitted with attachments for lifting gear, or — be designed so that it can be fitted with such attachments (e.g. threaded holes), or — be shaped in such a way that standard lifting gear can easily be attached. <p>Where machinery or one of its component parts is to be</p>	YES	Special arrangements must be made for the handling of tools and/or machinery parts, even if lightweight, which could be dangerous (shape, material, etc.).

	<p>moved by hand, it must:</p> <ul style="list-style-type: none"> — either be easily movable, or — be equipped for picking up (e.g. hand-grips, etc.) and moving in complete safety. 		
1.2.	CONTROLS		
1.2.1.	<p>Safety and reliability of control systems</p> <p>Control systems must be designed and constructed so that they are safe and reliable, in a way that will prevent a dangerous situation arising.</p> <p>Above all they must be designed and constructed in such a way that:</p> <ul style="list-style-type: none"> — they can withstand the rigours of normal use and external factors, — errors in logic do not lead to dangerous situations. 	YES	
	<p>Control devices</p> <p>Control devices must be:</p> <ul style="list-style-type: none"> — clearly visible and identifiable and appropriately marked where necessary, — positioned for safe operation without hesitation or loss of subjected to considerable strain. <p>Where a control is designed and constructed to perform several different actions, namely where there is no one-to-one correspondence (e.g. keyboards, etc.), the action to be performed must be clearly displayed and subject to time, and without ambiguity,</p> <ul style="list-style-type: none"> — designed so that the movement of the control is consistent with its effect, — located outside the danger zones, except for certain controls where necessary, such as emergency stop, console for training of robots, — positioned so that their operation cannot cause additional risk, — designed or protected so that the desired effect, where a risk is involved, cannot occur without an intentional operation, — made so as to withstand foreseeable strain; particular paid to emergency stop devices liable to be confirmation where necessary. 	YES	<p>Controls must be so arranged that their layout, travel and resistance to operation are compatible with the action to be performed, taking account of ergonomic principles.</p> <p>Constraints due to the necessary or foreseeable use of personal protection equipment (such as footwear, gloves, etc.) must be taken into account.</p> <p>Machinery must be fitted with indicators (dials, signals, etc.) as required for safe operation.</p> <p>The operator must be able to read them from the control position.</p> <p>From the main control position the operator must be able to ensure that there are no exposed persons in the danger zones.</p> <p>If this is impossible, the control system must be designed and constructed so that an acoustic and/or visual warning signal is given whenever the machinery is about to start.</p> <p>The exposed person must have the time and the means to take rapid action to prevent the machinery starting up.</p>
1.2.3.	<p>Starting</p> <p>It must be possible to start machinery only by voluntary actuation of a control provided for the purpose.</p> <p>The same requirement applies:</p> <ul style="list-style-type: none"> — when restarting the machinery after a stop-page, whatever the cause, — when effecting a significant change in the operating conditions (e.g. speed, pressure, etc.), unless such restarting or change in operating conditions is without risk to exposed persons. 	YES	<p>This essential requirement does not apply to the restarting of the machinery or to the change in operating conditions resulting from the normal sequence of an automatic cycle.</p> <p>Where machinery has several starting controls and the operators can therefore put each other in danger, additional devices (e.g. enabling devices or selectors allowing only one part of the starting mechanism to be actuated at any one time) must be fitted to rule out such risks.</p> <p>It must be possible for automated plant functioning in automatic mode to be restarted easily after a stoppage once the safety conditions have been fulfilled.</p>
1.2.4.	<p>Stopping device</p> <p>Normal stopping</p> <p>Each machine must be fitted with a control whereby the machine can be brought safely to a complete stop.</p>	YES	<p>Each workstation must be fitted with a control to stop some or all of the moving parts of the machinery, depending on the type of hazard, so that the machinery is rendered safe.</p> <p>The machinery's stop control must have priority over the start controls.</p> <p>Once the machinery or its dangerous parts have stopped, the energy supply to the actuators concerned must be cut off.</p>
	<p>Emergency stop</p> <p>Each machine must be fitted with one or more emergency stop devices to enable actual or impending danger to be averted.</p> <p>Once active operation of the emergency stop control has ceased following a stop command, that command must be sustained by engagement of the emergency stop device until that engagement is specifically overridden; it must not be possible to engage the device without triggering a stop command; it must be possible to disengage the device only by an appropriate operation, and disengaging the device must not restart the machinery but only permit restarting.</p>	YES	<p>The following exceptions apply:</p> <ul style="list-style-type: none"> — machines in which an emergency stop device would not lessen the risk, either because it would not reduce the stopping time or because it would not enable the special measures required to deal with the risk to be taken, <p>This device must:</p> <ul style="list-style-type: none"> — have clearly identifiable, clearly visible and quickly accessible controls, — stop the dangerous process as quickly as possible, without creating additional hazards,

			— where necessary, trigger or permit the triggering of certain safeguard movements.
	Complex installations In the case of machinery or parts of machinery designed to work together, the manufacturer must so design and construct the machinery that the stop controls, including the emergency stop, can stop not only the machinery itself but also all equipment upstream and/or downstream if its continued operation can be dangerous.	YES	
1.2.5.	Mode selection The control mode selected must override all other control systems with the exception of the emergency stop. If machinery has been designed and built to allow for its use in several control or operating modes presenting different safety levels (e.g. to allow for adjustment, maintenance, inspection, etc.), it must be fitted with a mode selector which can be locked in each position. Each position of the selector must correspond to a single operating or control mode. The selector may be replaced by another selection method which restricts the use of certain functions of the machinery to certain categories of operator (e.g. access codes for certain numerically controlled functions, etc.). If, for certain operations, the machinery must be able to operate with its protection devices neutralised, the mode selector must simultaneously: — disable the automatic control mode, — permit movements only by controls requiring sustained action, — permit the operation of dangerous moving parts only in enhanced safety conditions (e.g. reduced speed, reduced power, step-by-step, or other adequate provision) while preventing hazards from linked sequences, — prevent any movement liable to pose a danger by acting voluntarily or involuntarily on the machine's internal sensors. In addition, the operator must be able to control operation of the parts he is working on at the adjustment point.	YES	
1.2.6.	Failure of the power supply The interruption, re-establishment after an interruption or fluctuation in whatever manner of the power supply to the machinery must not lead to a dangerous situation. In particular: — the machinery must not start unexpectedly, — the machinery must not be prevented from stopping if the command has already been given, — no moving part of the machinery or piece held by the machinery must fall or be ejected, — automatic or manual stopping of the moving parts whatever they may be must be unimpeded, — the protection devices must remain fully effective.	YES	
1.2.7.	Failure of the control circuit A fault in the control circuit logic, or failure of or damage to the control circuit must not lead to dangerous situations. In particular: — the machinery must not start unexpectedly, — the machinery must not be prevented from stopping if the command has already been given, — no moving part of the machinery or piece held by the machinery must fall or be ejected, — automatic or manual stopping of the moving parts whatever they may be must be unimpeded, — the protection devices must remain fully effective.	YES	
1.2.8.	Software Interactive software between the operator and the command or control system of a machine must be user-friendly.	YES	
1.6.	MAINTENANCE		
1.6.1.	Machinery maintenance Adjustment, lubrication and maintenance points must be located outside danger zones. It must be possible to carry out adjustment, maintenance, repair, cleaning and servicing operations while machinery is at a standstill. If one or more of the above conditions cannot be satisfied for technical reasons, these operations must be possible without risk (see 1.2.5). In the case of automated machinery and, where necessary,	YES	Automated machine components which have to be changed frequently, in particular for a change in manufacture or where they are liable to wear or likely to deteriorate following an accident, must be capable of being removed and replaced easily and in safety. Access to the components must enable these tasks to be carried out with the necessary technical means (tools, measuring instruments, etc.) in

	other machinery, the manufacturer must make provision for a connecting device for mounting diagnostic fault-finding equipment.		accordance with an operating method specified by the manufacturer.
1.6.2.	Access to operating position and servicing points The manufacturer must provide means of access (stairs, ladders, catwalks, etc.) to allow access in safety to all areas used for production, adjustment and maintenance operations.	YES	
1.6.3.	Isolation of energy sources All machinery must be fitted with means to isolate it from all energy sources. Such isolators must be clearly identified. They must be capable of being locked if reconnection could endanger exposed persons. In the case of machinery supplied with electricity through a plug capable of being plugged into a circuit, separation of the plug is sufficient. The isolator must be capable of being locked also where an operator is unable, from any of the points to which he has access, to check that the energy is still cut off.	YES	After the energy is cut off, it must be possible to dissipate normally any energy remaining or stored in the circuits of the machinery without risk to exposed persons. As an exception to the above requirements, certain circuits may remain connected to their energy sources in order, for example, to hold parts, protect information, light interiors, etc. In this case, special steps must be taken to ensure operator safety.
1.6.4.	Operator intervention Machinery must be so designed, constructed and equipped that the need for operator intervention is limited.	YES	If operator intervention cannot be avoided, it must be possible to carry it out easily and in safety.
1.6.5.	Cleaning of internal parts The machinery must be designed and constructed in such a way that it is possible to clean internal parts which have contained dangerous substances or preparations without entering them; any necessary unblocking must also be possible from the outside. If it is absolutely impossible to avoid entering the machinery, the manufacturer must take steps during its construction to allow cleaning to take place with the minimum of danger.	YES	
1.7.	INDICATORS		
1.7.0.	Information devices The information needed to control machinery must be unambiguous and easily understood. It must not be excessive to the extent of overloading the operator. Where the health and safety of exposed persons may be endangered by a fault in the operation of unsupervised machinery, the machinery must be equipped to give an appropriate acoustic or light signal as a warning.	YES	
1.7.1.	Warning devices Where machinery is equipped with warning devices (such as signals, etc.), these must be unambiguous and easily perceived. The operator must have facilities to check the operation of such warning devices at all times. The requirements of the specific Directives concerning colours and safety signals must be complied with.	YES	
1.7.2.	Warning of residual risks Where risks remain despite all the measures adopted or in the case of potential risks which are not evident (e.g. electrical cabinets, radioactive sources, bleeding of a hydraulic circuit, hazard in an unseen area, etc.), the manufacturer must provide warnings. Such warnings should preferably use readily understandable pictograms and/or be drawn up in one of the languages of the country in which the machinery is to be used, accompanied, on request, by the languages understood by the operators.	YES	
1.7.3.	Marking All machinery must be marked legibly and indelibly with the following minimum particulars: — name and address of the manufacturer, — the CE marking (see Annex III),	YES	Machinery must also bear full information relevant to its type and essential to its safe use (e.g. maximum speed of certain rotating parts, maximum diameter of tools to be fitted, mass, etc.). Where a machine part must be handled during use

	<ul style="list-style-type: none"> — designation of series or type, — serial number, if any, — the year of construction. <p>Furthermore, where the manufacturer constructs machinery intended for use in a potentially explosive atmosphere, this must be indicated on the machinery.</p> <p>The interchangeable equipment referred to in the third 1(2)(a), must bear the same information.</p>		with lifting equipment, its mass must be indicated legibly, indelibly and unambiguously.
1.7.4.	<p>Instructions</p> <p>(a) All machinery must be accompanied by instructions including at least the following:</p> <ul style="list-style-type: none"> — a repeat of the information with which the machinery is marked, except the serial number (see 1.7.3) together with any appropriate additional information to facilitate maintenance (e.g. addresses of the importer, repairers, etc.), — foreseen use of the machinery within the meaning of 1.1.2(c), — workstation(s) likely to be occupied by operators, — instructions for safe: — putting into service, — use, — handling, giving the mass of the machinery and its various parts where they are regularly to be transported separately, — assembly, dismantling, — adjustment, — maintenance (servicing and repair), — where necessary, training instructions, — where necessary, the essential characteristics of tools which may be fitted to the machinery. <p>Where necessary, the instructions should draw attention to ways in which the machinery should not be used.</p> <p>(b) The instructions must be drawn up in one of the Community languages by the manufacturer or his authorised representative established in the Community. On being put into service, all machinery must be accompanied by a translation of the instructions in the language or languages of the country in which the machinery is to be used any by the instructions in the original language.</p> <p>This translation must be done either by the manufacturer or his authorised representative established in the Community or by the person introducing the machinery into the language area in question.</p> <p>By way of derogation from this requirement, the maintenance instructions for use by specialised personnel employed by the manufacturer or his authorised representative established in the Community may be drawn up in only one of the Community languages understood by that personnel.</p> <p>(c) The instructions must contain the drawings and diagrams necessary for putting into service, maintenance, inspection, checking of correct operation and, where appropriate, repair of the machinery, and all useful instructions in particular with regard to safety.</p> <p>(d) Any literature describing the machinery must not contradict the instructions as regards safety aspects. The technical documentation describing the machinery must give information regarding the airborne noise emissions referred to in (f) and, in the case of hand-held and/or hand-guided machinery, information regarding vibration as referred to in 2.2.</p> <p>(e) Where necessary, the instructions must give the requirements relating to installation and assembly for reducing noise or vibration (e.g. use of dampers, type and mass of foundation block, etc.).</p> <p>(f) The instructions must give the following information concerning airborne noise emissions by the machinery, either the actual value or a value established on the basis of measurements made on identical machinery:</p> <ul style="list-style-type: none"> — equivalent continuous A-weighted sound pressure level at workstations, where this exceeds 70 dB(A); where this level does not exceed 70 dB(A), this fact must be indicated, — peak C-weighted instantaneous sound pressure value at workstations, where this exceeds 63 Pa (130 dB in relation to 20 µPa), — sound power level emitted by the machinery where the equivalent continuous A-weighted sound pressure level at workstations exceeds 85 dB(A). <p>In the case of very large machinery, instead of the sound power level, the equivalent continuous sound pressure</p>	YES	

	<p>levels at specified positions around the machinery may be indicated.</p> <p>Where the harmonised standards are not applied, sound levels must be measured using the most appropriate method for the machinery.</p> <p>The manufacturer must indicate the operating conditions of the machinery during measurement and what methods have been used for the measurement.</p> <p>Where the workstation(s) are undefined or cannot be defined, sound pressure levels must be measured at a distance of 1 metre from the surface of the machinery and at a height of 1,60 metres from the floor or access platform.</p> <p>The position and value of the maximum sound pressure must be indicated.</p> <p>(g) If the manufacturer foresees that the machinery will be used in a potentially explosive atmosphere, the instructions must give all the necessary information.</p> <p>(h) In the case of machinery which may also be intended for use by nonprofessional operators, the wording and layout of the instructions for use, whilst respecting the other essential requirements mentioned above, must take into account the level of general education and acumen that can reasonably be expected from such operators.</p>		
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3. HAZARDS ANALYSIS

3.1 FIELD OF APPLICATION OF THE HAZARDS ANALYSIS

This document is intended to evaluate the hazards for the “machine” as identified by Charter 1 of this Technical File.

These hazards arise during handling, installation, operation and maintenance.

The hazard analysis in compliance with the 98/37/EC Directive refers to the Rotating Mixer supplied by Officine Saspe S.r.l. and it points out residual hazards as well as the procedures required to minimise the effect that shall be made known to the user.

The hazard evaluation has been carried out on the basis of a correct use of the equipment.

3.2 HAZARDS

The criteria required to remove, as far as possible, the foreseeable hazards that have been evaluated by means of the analysis attached hereto have been adopted for design and manufacture.

The manufacturers have performed the hazard analysis for the various components in advance and identified the residual hazards described by the manufacturer’s instructions for use.

This hazard analysis only refers to the identification of the machine and the procedures required to reduce the effect (as a consequence, it will not consider the residual hazards of the equipment supplied with the manufacturer’s CE certification).

The residual hazards are pointed out by the notes of the analysis sheets. They will be either removed or reduced by following:

- Instructions for the correct use of the equipment pointed out by the instructions supplied by the manufacturers of every single equipment
- The manual with the instructions for installation, operation and maintenance that will be delivered to the user

note: where, for machinery, the risks are mainly of electrical origin, such machinery shall be covered exclusively by Directive 73/23/EEC (1).

(1) Council Directive 74/150/EEC of 4 March 1974 on the approximation of the laws of the Member States relating to the type-approval of wheeled agricultural or forestry tractors (OJ L 84, 28.3.1974, p. 10). Directive as last amended by Decision 95/1/EC, Euratom, ECSC (OJ L 1, 1.1.1995, p. 1).

1.3.	PROTECTION AGAINST MECHANICAL HAZARDS	Acc.to ESR	NOTES
1.3.1.	<i>Stability</i> Machinery, components and fittings thereof must be so designed and constructed that they are stable enough, under the foreseen operating conditions (if necessary taking climatic conditions into account) for use without risk of overturning, falling or unexpected movement.	YES	If the shape of the machinery itself or its intended installation does not offer sufficient stability, appropriate means of anchorage must be incorporated and indicated in the instructions.
1.3.2.	<i>Risk of break-up during operation</i> The various parts of machinery and their linkages must be able to withstand the stresses to which they are subject when manufacturer. The durability of the materials used must be adequate for the nature of the work place foreseen by the manufacturer, in particular as regards the phenomena of fatigue, ageing, corrosion and abrasion. The manufacturer must indicate in the instructions the type and frequency of inspection and maintenance required for safety reasons. He must, where appropriate, indicate the parts subject to wear and the criteria for replacement. Where a risk of rupture or disintegration remains despite the measures taken (e.g. as with grinding wheels) the moving parts must be mounted and positioned in such a way that in case of rupture their fragments will be contained.	YES	Both rigid and flexible pipes carrying fluids, particularly those under high pressure, must be able to withstand the foreseen internal and external stresses and must be firmly attached and/or protected against all manner of external stresses and strains; precautions must be taken to ensure that no risk is posed by a rupture (sudden movement, high-pressure jets, etc.). Where the material to be processed is fed to the tool automatically, the following conditions must be fulfilled to avoid risks to the persons exposed (e.g. tool breakage): — when the workpiece comes into contact with the tool the latter must have attained its normal working conditions, — when the tool starts and/or stops (intentionally or accidentally) the feed movement and the tool movement must be coordinated.
1.3.3.	<i>Risks due to falling or ejected objects</i> Precautions must be taken to prevent risks from falling or ejected objects (e.g. workpieces, tools, cuttings, fragments, waste, etc.).	YES	
1.3.4.	<i>Risks due to surfaces, edges or angles</i> In so far as their purpose allows, accessible parts of the machinery must have no sharp edges, no sharp angles, and no rough surfaces likely to cause injury.	YES	
1.3.5.	<i>Risks related to combined machinery</i> Where the machinery is intended to carry out several different operations with the manual removal of the piece between each operation (combined machinery), it must be designed and constructed in such a way as to enable each element to be used separately without the other elements constituting a danger or risk for the exposed person. For this purpose, it must be possible to start and stop separately any elements that are not protected.	YES	
1.3.6.	<i>Risks relating to variations in the rotational speed of tools</i> When the machine is designed to perform operations under different conditions of use (e.g. different speeds or energy supply), it must be designed and constructed in such a way that selection and adjustment of these conditions can be carried out safely and reliably.	YES	
1.3.7.	<i>Prevention of risks related to moving parts</i> The moving parts of machinery must be designed, built and laid out to avoid hazards or, where hazards persist, fixed with guards or protective devices in such a way as to prevent all risk of contact which could lead to accidents. All necessary steps must be taken to prevent accidental blockage of moving parts involved in the work.	YES	In cases where, despite the precautions taken, a blockage is likely to occur, specific protection devices or tools, the instruction handbook and possibly a sign on the machinery should be provided by the manufacturer to enable the equipment to be safely unblocked.

1.3.8.	<p>Choice of protection against risks related to moving parts Guards or protection devices used to protect against the risks related to moving parts must be selected on the basis of the type of risk. The following guidelines must be used to help make the choice.</p> <p>A. Moving transmission parts Guards designed to protect exposed persons against the risks associated with moving transmission parts (such as pulleys, belts, gears, rack and pinions, shafts, etc.) must be: — either fixed, complying with requirements 1.4.1 and 1.4.2.1, or — movable, complying with requirements 1.4.1 and 1.4.2.2.A. Movable guards should be used where frequent access is foreseen.</p> <p>B. Moving parts directly involved in the process Guards or protection devices designed to protect exposed persons against the risks associated with moving parts contributing to the work (such as cutting tools, moving parts of presses, cylinders, parts in the process of being machined, etc.) must be: — wherever possible fixed guards complying with requirements 1.4.1 and 1.4.2.1, — otherwise, movable guards complying with requirements 1.4.1 and 1.4.2.2.B or protection devices such as sensing devices (e.g. non-material barriers, sensor mats), remote-hold protection devices (e.g. two-hand controls), or protection devices intended automatically to prevent all or part of the operator's body from encroaching on the danger zone in accordance with requirements 1.4.1 and 1.4.3.</p>	YES	<p>However, when certain moving parts directly involved in the process cannot be made completely or partially inaccessible during operation owing to operations requiring nearby operator intervention, where technically possible such parts must be fitted with: — fixed guards, complying with requirements 1.4.1 and 1.4.2.1 preventing access to those sections of the parts that are not used in the work, — adjustable guards, complying with requirements 1.4.1 and 1.4.2.3 restricting access to those sections of the moving parts that are strictly for the work.</p>
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1.4.	REQUIRED CHARACTERISTICS OF GUARDS AND PROTECTION DEVICES	Acc.to ESR	NOTE
1.4.1.	<p>General requirements Guards and protection devices must: — be of robust construction, — not give rise to any additional risk, — not be easy to by-pass or render non-operational, — be located at an adequate distance from the danger zone, — cause minimum obstruction to the view of the production process, — enable essential work to be carried out on installation and/or replacement of tools and also for maintenance by restricting access only to the area where the work has to be done, if possible without the guard or protection device having to be dismantled.</p>	YES	
1.4.2.	Special requirements for guards		
1.4.2.1.	<p>Fixed guards Fixed guards must be securely held in place. They must be fixed by systems that can be opened only with tools. Where possible, guards must be unable to remain in place without their fixings.</p>	YES	
1.4.2.2.	<p>Movable guards A. Type A movable guards must: — as far as possible remain fixed to the machinery when open, — be associated with a locking device to prevent moving parts starting up as long as these parts can be accessed and to give a stop command whenever they are no longer closed.</p> <p>B. Type B movable guards must be designed and incorporated into the control system so that: — moving parts cannot start up while they are within the operator's reach, — the exposed person cannot reach moving parts once they have started up, — they can be adjusted only by means of an intentional action, such as the use of a tool, key, etc., — the absence or failure of one of their components prevents starting or stops the moving parts, — protection against any risk of ejection is proved by means of an appropriate barrier.</p>	YES	
1.4.2.3.	<p>Adjustable guards restricting access Adjustable guards restricting access to those areas of the moving parts strictly necessary for the work must: — be adjustable manually or automatically according to the type of work involved, — be readily adjustable without the use of tools, — reduce as far as possible the risk of ejection.</p>		

1.4.3.	<p><i>Special requirements for protection devices</i></p> <p>Protection devices must be designed and incorporated into so that:</p> <ul style="list-style-type: none"> — moving parts cannot start up while they are within the operator's reach, — the exposed person cannot reach moving parts once they have started up, — they can be adjusted only by means of an intentional use of a tool, key, etc., — the absence or failure of one of their components prevents starting or stops the moving parts. 		
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1.5.	PROTECTION AGAINST OTHER HAZARDS	Acc.to ESR	NOTE
1.5.1.	<p><i>Electricity supply</i></p> <p>Where machinery has an electricity supply it must be designed, constructed and equipped so that all hazards of an electrical nature are or can be prevented.</p>	YES	The specific rules in force relating to electrical equipment designed for use within certain voltage limits must apply to machinery which is subject to those limits.
1.5.2.	<p><i>Static electricity</i></p> <p>Machinery must be so designed and constructed as to prevent or limit the build-up of potentially dangerous electrostatic charges and/or be fitted with a discharging system.</p>	YES	
1.5.3.	<p><i>Energy supply other than electricity</i></p> <p>Where machinery is powered by an energy other than electricity (e.g. hydraulic, pneumatic or thermal energy, etc.), it must be so designed, constructed and equipped as to avoid all potential hazards associated with these types of energy.</p>	YES	
1.5.4.	<p><i>Errors of fitting</i></p> <p>Errors, likely to be made when fitting or refitting certain parts which could be a source of risk must be made impossible by the design of such parts or, failing this, by information given on the parts themselves and/or the housings.</p> <p>The same information must be given on moving parts and/or their housings where the direction of movement must be known to avoid a risk.</p>	YES	Any further information that may be necessary must be given in the instructions. Where a faulty connection can be the source of risk, incorrect fluid connections, including electrical conductors, must be made impossible by the design or, failing this, by information given on the pipes, cables, etc. and/or connector blocks.
1.5.5.	<p><i>Extreme temperatures</i></p> <p>Steps must be taken to eliminate any risk of injury caused by contact with or proximity to machinery parts or materials at high or very low temperatures.</p> <p>The risk of hot or very cold material being ejected should be assessed.</p> <p>Where this risk exists, the necessary steps must be taken to prevent it or, if this is not technically possible, to render it non-dangerous.</p>	YES	
1.5.6.	<p><i>Fire</i></p> <p>Machinery must be designed and constructed to avoid all risk of fire or overheating posed by the machinery itself or by gases, liquids, dust, vapours or other substances produced or used by the machinery.</p>	YES	
1.5.7.	<p><i>Explosion</i></p> <p>Machinery must be designed and constructed to avoid any risk of explosion posed by the machinery itself or by gases, liquids, dust, vapours or other substances produced or used by the machinery.</p> <p>To that end the manufacturer must take steps to:</p> <ul style="list-style-type: none"> — avoid a dangerous concentration of products, — prevent combustion of the potentially explosive atmosphere, — minimise any explosion which may occur so that it does not endanger the surroundings. <p>The same precautions must be taken if the manufacturer foresees the use of the machinery in a potentially explosive atmosphere.</p>	YES	Electrical equipment forming part of the machinery must conform, as far as the risk from explosion is concerned, to the provision of the specific.
1.5.8.	<p><i>Noise</i></p> <p>Machinery must be so designed and constructed that risks resulting from the emission of airborne noise are reduced to the lowest level taking account of technical progress and the availability of means of reducing noise, in particular at source.</p>	YES	
1.5.9.	<p><i>Vibration</i></p> <p>Machinery must be so designed and constructed that risks resulting from vibrations produced by the machinery are reduced to the lowest level, taking account of technical progress and the availability of means of reducing vibration, in particular at source.</p>	YES	

1.5.10.	Radiation Machinery must be so designed and constructed that any emission of radiation is limited to the extent necessary for its operation and that the effects on exposed persons are non-existent or reduced to non-dangerous proportions.	YES	
1.5.11.	External radiation Machinery must be so designed and constructed that external not interfere with its operation.	YES	
1.5.12.	Laser equipment Where laser equipment is used, the following provisions should be taken into account: — laser equipment on machinery must be designed and constructed so as to prevent any accidental radiation, — laser equipment on machinery must be protected so that effective radiation, radiation produced by reflection or diffusion and secondary radiation do not damage health, — optical equipment for the observation or adjustment of laser equipment on machinery must be such that no health risk is created by the laser rays.	YES	
1.5.13.	Emissions of dust, gases, etc. Machinery must be so designed, constructed and/or equipped that risks due to gases, liquids, dust, vapours and other waste be avoided. Where a hazard exists, the machinery must be so equipped that the said substances can be contained and/or evacuated. Where machinery is not enclosed during normal operation, the devices for containment and/or evacuation must be situated as close as possible to the source emission.	YES	
1.5.14.	Risk of being trapped in a machine Machinery must be designed, constructed or fitted with a means of preventing an exposed person from being enclosed within it or, if that is impossible, with a means of summoning help.	YES	
1.5.15.	Risk of slipping, tripping or falling Parts of the machinery where persons are liable to move about or stand must be designed and constructed to prevent persons slipping, tripping or falling on or off these parts.	YES	

OTHER TYPES OF HAZARDS	DESCRIPTION	RESIDUAL HAZARD	REMEDY
FLUID			
Fluid type	DUST DETERGENT	-	-
Toxic	NO	-	-
Flammable	NO	-	-
Explosive	NO	-	-
Material corrosion	Not corrosive fluid for used material	-	-
Filling	Not applicable harmful effects for filling	-	-
Drain and vent	Not applicable	-	-
Draining	Not applicable	-	-
PRESSURE			
Overheating	Negligible up to max. intended operating temperature	-	-

Exothermic reaction	Not applicable	-	-
Bursting	Not applicable	-	-
External fire	The assembly shall be arranged far from free flames and flammable fluids because they may damage the equipment (in particular, regulation devices) and cause overheating.	External fire	The user shall protect the area where the machine will be located against any fire. It shall take the precautions required to avoid the storage of flammable fluids in the area where the machine is used.
Detachment of feed and discharge pipes	Feed and discharge pipes are equipped with flanged joints that can be only removed if the machine is depressurised and at the atmospheric temperature. Accidental detachment is not applicable.	Detachment of pipes	The user shall not damage the pipes or detach the joints when the plant is pressurised and/or working. It shall also make sure that the joints are firmly tightened. Whenever you detach flanged joints, please use the same gaskets as those replaced.
Accidental cover opening	Not applicable	-	-
Discharge lock	The discharge lock shall cause no pressure increase. This is ensured by the devices intended to regulate pressure and by the safety valves intended to protect the machine.	-	-
Water hammer	Not applicable.	-	-
TEMPERATURE			
High temperature	Not applicable	-	-
Low temperature	The machine is made of materials suitable for the minimum intended operating temperature...	-	-
Excessive power	Not applicable	-	-
Excessive flow rate	Not applicable	-	-
Liquid phase level too high or too low		-	-
Transient conditions related to water hammer.	Not applicable	-	-
Fatigue fracture			
Pulsation	Not applicable	-	-
Cavitation	Not applicable	-	-
Erosion	Not applicable	-	-
Abrasion	Not applicable	-	-
Fouling		-	-
TEST FLUID			
Fluid weight	Negligible	-	-
Material compatibility	Not applicable	-	-
Vent and drain nozzles	Not applicable	-	-
Membrane resistance during the pressurisation test	Membranes are stable at the pressure intended for the pressurisation test.	-	-
Pneumatic test	Not applicable	-	-
EXTERNAL			

EQUIPMENTS			
Level indicator	Not applicable	-	-
Pumps, vibration generators, fatigue	Non applicable	-	-
Supports	Supports have been designed to provide for hazard-free stability.	-	-
Moments due to asymmetric loads or thrusts	Non applicable	-	-
Localised loads	Negligible	-	-
Baffle plates, material compatibility, fatigue	Not applicable	-	-
Inspection means	Sight glass	-	-
Pipeline support systems, other loads	Pipelines shall exert no load higher than those provided for by the machine manufacturer.	-	-
Cyclones, electrostatic devices	Not applicable	-	-
Sprayers	Intended for perfuming	-	-
Heating and cooling devices	Not applicable	-	-
Layers	Not applicable	-	-
MECHANICAL EXTERNAL LOADS			
Lifting lugs		Dangers when lifting and handling pipelines	Use proper lifting means and devices as well as expert personnel who will operate according to the manual instructions
Piping loadings	Not applicable	-	-
External thermal loadings	The equipment shall be kept far from external heat loads.	-	-
INSTALLATION			
Wind loadings	Negligible	-	-
Earthquake loadings	Negligible	-	-
Water and snow loadings	Not applicable	-	-
thunderbolts, electrical discharges		Damages as a result of thunderbolts and electrical discharges	Connect the machine and the pipelines with the equipotential earthing mains and protect them against thunderbolts and electrical discharges according to the regulations.
Room temperature and altitude	Provided for by the specifications		
PIPING			
Drain systems shall be arranged wherever condensate may build up inside the pipes.	Not applicable	-	-

The hazard of unintentional discharge shall be reduced to a minimum by marking fluid drawing points clearly	Not applicable	-	-
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4. DRAWINGS

Data sheet

2F11.35.136

SEE ANNEX "1"

5. ENGINEERING AND STANDARDS OF REFERENCES

The machine is supplied with the CE certification.

BALLESTRA S.p.A. – MILANO has dimensioned the various components.

The intended use of the machine implies the observance of the technical instructions supplied by the “Installation, Operation and Maintenance Manual”.

The design and study of the machine has considered all the phases of its “life”:

- 1) Manufacture
- 2) Transport and setting at work
- 3) Operation
- 4) Setting out of order

6. WELDING

Welds have been performed by manual procedures and in a workmanlike manner.

Certified and qualified welders have been employed.

Sound constructive and technical practices suitable for the purpose have been adopted during the performance of the welds. Efficient and high-quality weld materials and equipments have been used.

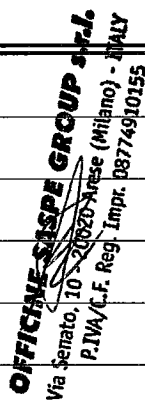
ANNEX A1

DATA SHEET

ANNEX A2

INSPECTION PLAN

INSPECTION PLAN

MANUFACTURER <i>OFFICINE SASPE S.r.l.</i> ACTIVITY N°	ACTIVITY DESCRIPTION	MANUFACTURER SIGNATURE	DATE	NOTES
1	MATERIAL CERT. EXAMINATION	 OFFICINE SASPE GROUP S.r.l. Via Senato, 10 - 20020 Arese (Milano) - ITALY P.IVA/C.F. Reg. Impr. 08774910155		
2	VISUAL AND DIMENSION CHECK			
3	VISUAL CHECK OF 100% WELDS			
4	NAMEPLATE REVIEW			
5	REVIEW OF FINAL DOCUMENTATION			
6	SHIPPING PREPARATION			
7	INSULATION	N/A	N/A	

OFFICINE SASPE GROUP S.r.l.

Sede legale: Via Quintino Sella, 4 – 20121 MILANO

Sede Amministrativa: Via Senato, 10 – 20020 Arese (MI)

☎ 02/93583087 – 93583154 - FAX 02/93583154

ANNEX A3

MATERIAL CERTIFICATES

 ArcelorMittal Correspondence address: ArcelorMittal Genk - Stainless Rumpo Swinnenwijkweg 5, 3600 Genk, Belgium Tel: +32 (0)89 30 21 11		MILL CERTIFICATE EN 10204/3.1 CERTIFICAT DE RECEPTION NF EN 10204/3.1 ABNAHMEPRÜFZEUGNIS DIN EN 10204/3.1		FOURCEMENT STAINLESS (4) 304 L <div style="text-align: right; font-weight: bold;">01 MAR 2012</div> <div style="text-align: right;">GRIFFON & ROMANO S.p.A.</div>																																		
		Company Certificate: Certified acc. PED 97/23/EC Annex I § 4.3 by Certification Body 0036 of TÜV SÜD, Industrie Service GmbH with certificate No.: 314/2007/MUC. Renounced of separator signature agreed by TÜV SÜD (9/5/2007). Approved acc. AD 2000-Merkblatt WD/TÖD 100 by TÜV SÜD Industrie Service GmbH. Condemnation letter from TÜV SÜD Industrie Service GmbH n° 07/05/2010 about the uniformity of coils acc. AD 2000 W2 § 4.1.1. Tech. Req. AD 2000 W2/2008 - AD 2000 W10/2007 - DN 13445-4/2009 (cor 2010)																																				
Manufacturer's works order number N° de la commande usine productrice Werksauftragsnummer 80012346/01-20550/460/01		Surveyor's mark Cachet du Représentant Stempel des Werksachverständigen <div style="text-align: center; font-weight: bold; font-size: 2em;">AMSE</div>		Purchaser and/or consignee Client/au destinataire Besteller und/oder Empfänger GRIFFON & ROMANO S.p.A. VIA TACITO 8-10 20094 CORSICO ITALIA																																		
				Purchaser's order number N° de commande client Kundenbestellnummer 20-0197 dicembre																																		
Product - Produit - Erzeugnis COILS, HOT ROLLED, ANNEALED AND PICKLED COILS, LAMINÉ À CHAUD, RECUTS + DRAPÉS COILS, WARMGEWALZT, BEGLÜHT UND GEBEZT		Any supplementary requirements Prescriptions supplémentaires - Zusätzliche Anforderungen		Customer article number Numéro de l'article Artikelnummer des Kunden																																		
				Product delivery condition État de livraison du produit - Lieferzustand																																		
Steel designation Désignation duacier Stahlbezeichnung EN 10028-2-2008 1A307 / 1A301 EN 10028-2-2005 1A307 / 1A301 ASTM A 240-2009 type 304L/304 ASME SA 240-2001 type 304/304		Steelmaking process Mode d'élaboration duacier - Stahlherstellungsverfahren Prod. process: Electric arc furnace - VOD/AOD - Continuous casting Proc. fabric.: Four à arc - VOD/AOD - Coules continue Fertigungsverfahren: Elektro-Ofen - VOD/AOD - Stranggießanlage		Solution treated Hygiène: 1050 C Lösungsgelöst/abgeschreckt																																		
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IDENTIFICATION OF THE PRODUCT - IDENTIFICATION DU PRODUIT - IDENTIFIKATION DES ERZUGNISSES																																						
Coll. n. N.ordine - Band Nr. 04001146		Mat. n. N.ordre - Band Nr. 040011		Dimensions Dimensions - Abmessungen Thickness Epaisseur - Dicke 3.00 mm																																		
Width Largeur - Breite 1500.00 mm		Length Longueur - Länge 12360 mm		Number of pieces Nb de pièces - Stückerzahl 1																																		
Net weight Poids net - netto Gewicht 12360 KG																																						
CHEMICAL ANALYSIS - ANALYSE CHIMIQUE - CHEMISCHE ZUSAMMENSETZUNG																																						
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ArcelorMittal

Maatschappijke zolst:
ArcelorMittal - Staal en NV/SA
Koning Albert II-laan 35, 1080 Brussel, België
Correspondentieadres:
ArcelorMittal Bank - Staal en NV/SA
Willemsplein 1, 3000 Leuven, België
Tel. +32 (0)20 30 21 43

MILL CERTIFICATE BS EN 10204/3.1

CERTIFICAT DE RECEPTION NF EN 10204/3.1
ABNÄHMERPRÜFZEUGNIS DIN EN 10204/3.1

Approved acc. AD 2000-Markings-Verfahren für TÜV SÜD Industrie Service GmbH.
Certified acc. ENR 97/93/EC Annex 1 & 4.2 by Certification Body 0016 of TÜV SÜD
Industria Service GmbH with certificate No. 4147997/103
Renounced of Equivaler signature agreed by TÜV SÜD (9/5/2007).

FOTOCOPIA

CONFORME ALL'ORIGINALE

CORSICO

7 APR 2009

GRIFON e ROMANO S.p.A.

Manufacturer's work order number
N° de la commande ushio produccion
Werkauftragsnummer
90A839518/05-20550/420/05
Packing List: 2009K006666

Surveyor's name
Cachet de l'expert
Stempel des
Werkstoffverständigen

AMSE

Purchaser and/or consignee
Client, at/ou des destinataires
Besteller und/oder Empfänger
GRIFON e ROMANO S.p.A.

Batch/lot's order number
N° de commande-clients
Kundenbestellnummer
ORDINE 19/0007

Customer article number
N° article-client
Artikelnummer des Kunden

Product - Produit - Erzeugnis

VIA TACITO 8-10

20694 CORSICO (MI)

ITATIE

COILS, HOT ROLLED, ANNEALED AND PICKLED
COILS, REINFORCED A CHAUD, RECOUITS + DÉCAPÉS
COILS, WÄRMEROLLEN, GEZEUGTE UND BEARBEITET

Steel designation
Désignation du produit
Stahlbezeichnung

Ridish
Présentation
Auslieferung

Steel making process
Méthode de fabrication du produit - Stahlherstellungsverfahren
Reinigungs- und Wärmebehandlung
Four à arc-VOD/AOD-Continuous casting
Elschmelz- und VOD/AOD-Stahlgussanlage

Product delivery condition
Etat de livraison du produit
Lieferzustand

EN 10028-2/2006 V1.4307/1.4301
ASTM A 240 (A) - 06 TYPE 304X/304
AISI 304 240-07 TYPE 304X/304

3D
NO 1
NO 1

Any supplementary requirements
Précisions supplémentaires - Zusätzliche Anforderungen
X2 CRNL 1.8-9

Solution treated
Hydrotrempe
Lösungsgewärmebehandlung
1050 C

Forged ship - Alés forob
Gefäß für Schiff

AD 2000 W2/2006 -- AD 2000 W40/2007 -- EN 13445-2/2002
NACE MR 0175 / ISO 15848-1 REV.01 CORR.07 / ISO 15156-3 REV.03 CORR. 07

Identification of the product
Identification du produit - Identifizierung des Erzeugnisses

Dimensions
Dimensions - Abmessungen

Number of pieces
Nombre de pièces - Stückzahl

1

Coil n.
N° de bobine - Band Nr
900Q2415

Electn.
N° de coule - Behälter Nr
009024

Thickness
Épaisseur - Dicke
5.00 mm

Net weight
Poids net - Netto Gewicht
13540 KG

CHEMICAL ANALYSIS - ANALYSE CHIMIQUE - CHEMISCHE ZUSAMMENSETZUNG

	C	SI	Mn	Ni	Cr	Mo	Ti	N	S	P						
Required-Exigé Anforderung	% mini	% maxi														
	0.030	0.75	2.00	0.030	19.50			0.100	0.015	0.045						
Cast Analysis Analyse coulé	0.043	0.59	1.44	0.04	18.07			0.067	0.002	0.040						
Analysis Schmelze	0.041	0.51	1.44	0.04	18.07			0.067	0.002	0.040						

Tests to verify batch and quality have been carried out: OK
Tests de vérification de la qualité ont été effectués: OK
Versuchungsuntersuchungen durchgeführt: OK

OK
OK
OK

Batch test results are satisfactory EN 100 2438
Les essais de pliage sont satisfaisants 100 2438
Zugversuchsresultate entsprechen den Vorschriften

MECHANICAL PROPERTIES - PROPRIETES MECANQUES - MECHANISCHE WERTE EN 10002-1

Location (1)	Room Temperature - Température ambiante - Raumtemperatur	Test Temperature														
Direction (2)	Yield strength Limite d'élasticité Dehngrenze	Tensile strength Résistance à la traction Zugfestigkeit	Elongation after fracture (A) Allongement après rupture Bruchdehnung	Hardness Dureté Härte	Yield strength Limite d'élasticité Dehngrenze	Tensile strength Résistance à la traction Zugfestigkeit	Elongation % Allongement Bruchdehnung									
Required Exigé Anforderung	MPa	MPa	%		MPa	MPa	%									
1	210	250	520	45	45	45	92									
2	287	321	570	59	59	59	83									
3			624													

Impact strength test Essai de résilience Kerbschlagzähigkeitstest	Corrosion test Test de corrosion Korrosionstest	20 ± 2 (2) / 20 (2)	46													
EN 100	EN 100	EN 100	EN 100	EN 100	EN 100	EN 100	EN 100	EN 100	EN 100	EN 100	EN 100	EN 100	EN 100	EN 100	EN 100	EN 100

Location of the sample (1)
Emplacement de l'échantillon
Lage des Probenstellen
1. Front - Début - Anfang
2. Back - Fin - Ende
3. Middle - Milieu - Mitte




The delivery is in accordance with the order
La livraison est conforme aux exigences de la commande
Die Lieferung entspricht den Bestelldaten

Organization inspection
Organisme d'inspection
Zustellungsabteilung
Quality Department
16/02/2009
S. HILLEN

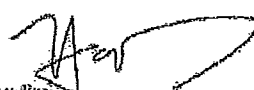
Direction of the test pieces (2)
Orientation des échantillons
Probenrichtung
T. Transverse - Travers - Quer
L. Longitudinal - Long - Längs

Marking, inspection and measurement - without objection
Contrôle de marquage, inspection et mesure - sans objection
Prüfung der Kennzeichnung, des Oberflächenzustands und der Abmessungen - ohne Beanstandung
The inspector
Le responsable
Der Werkstoffverständige

EN 10021 03/10/2008

 <p>UGINE & ALZ Belgische NV Mantelapartij 101 Gant-Zuid 2 Zonen 6A, Bynessenvoorweg 8; B 3600 Gant Tel. (090) 30 21 11 - Telefax (090) 30 23 80 Fax 39058-aldog b H.N. Tongeren 41.051 - B.T.W. nr BE 405.277.914</p>		<p>MILL CERTIFICATE BS EN 10204/3.1 CERTIFICAT DE RECEPTION NF EN 10204/3.1 ABNÄHMERPRÜFZEUGNIS DIN EN 10204/3.1</p> <p>Approved as supplier according to AD 2000, WO - TUB 100 Statement W 8.003 qualified per PED 97/23/EC by TUV. NR 0235</p>		<p>N-Nr-N 2007K0003075</p> 	
<p>Manufacturer's order number N° de commande usine productrice Wechselungsnummer</p> <p>60622568/03-20550/324/03 Backlog List: 2007202118</p>		<p>Successor's mark Cachet de l'expert</p> 		<p>Purchaser's order number N° de commande client Kundenbestellnummer</p> <p>ORD 16/0192</p>	
<p>Product - Produit - Erzeugnis</p> <p>COLLS; NON-ROBBER, ARMED AND RECHINA COLLS, KAMMEL A CHAIN, REPERES + DECAPE COLLS, KAMMELKAMMEL, KAMMELKAMMEL</p>		<p>VIA TACITO 8-10</p> <p>2004 CORSTCO (MT)</p>		<p>Customer article number N° article client Auftragsnummer des Kunden</p> <p>1050 C</p>	
<p>Steel designation Designation de l'acier Stahlschmelzung</p> <p>EN 10028-3/90 WR 1.4307/1.4302 25M A 240 (M) - 055 TUB 30A1/30A 25M 240 (M) 240 (M) TUB 30A1/30A</p>		<p>Steelmaking process Système de fabrication de l'acier: Stahlherstellungssystem</p> <p>Electric arc furnace - VOD/ACD - Continuous casting Elektro-Ofen - VOD/ACD - Strömungsabguss</p>		<p>Product delivery condition État de livraison du produit Lieferzustand</p> <p>Solution treated Hypotemper Lösungsgeglüht/geglüht</p>	
<p>Approved as supplier according to AD 2000, WO - TUB 100 Statement W 8.003 qualified per PED 97/23/EC by TUV. NR 0235</p>		<p>Approved as supplier according to AD 2000, WO - TUB 100 Statement W 8.003 qualified per PED 97/23/EC by TUV. NR 0235</p>		<p>Approved as supplier according to AD 2000, WO - TUB 100 Statement W 8.003 qualified per PED 97/23/EC by TUV. NR 0235</p>	

AD 2000 W2/2005 -- AB 2000 W19/2003 -- EN 13415-2/2002

<p>Identification of the product Identification du produit - Identifizierung des Erzeugnisses</p> <p>Colla: R° de boling - Brand Nr</p> <p>64813127</p>		<p>Dimensions Dimensions - Abmessungen</p> <p>Thickness Épaisseur - Dicke</p> <p>9.00 mm</p>		<p>Number of pieces Nombre de pièces - Stückzahl</p> <p>1</p>	
<p>Heat No. N° de chauffe - Rohmutter-Nr</p> <p>648131</p>		<p>Width Largeur - Breite</p> <p>2400.00 mm</p>		<p>Net weight Poids net - Netto Gewicht</p> <p>14570 KG</p>	
<p>CHEMICAL ANALYSIS - ANALYSE CHIMIQUE - CHEMISCHE ZUSAMMENSETZUNG</p>					
<p>Required-Range Fourchette requise</p> <p>0.030 0.040 2.00 10.00 19.00</p>		<p>Cast Analysis Analyse coulée</p> <p>0.025 0.030 1.40 0.04 10.07</p>		<p>Analysis-Result Analyse-Resultat</p> <p>0.025 0.030 1.40 0.04 10.07</p>	
<p>Tests to verify heat and quality have been carried out: OK Essais de vérification de la chaleur et de la qualité ont été effectués: OK Versuchungsergebnisse sind befriedigend: OK</p>					
<p>MECHANICAL PROPERTIES - PROPRIÉTÉS MÉCANIQUES - MECHANISCHE EIGENSCHAFTEN EN 10002-1</p>					
<p>Direction (1) Direction</p> <p>1. Transverse</p>		<p>Room temperature Température ambiante - Raumtemperatur</p> <p>Yield strength Limite d'élasticité ReL</p> <p>210</p>		<p>Tensile strength Résistance à la traction Rm</p> <p>520</p>	
<p>Direction (2) Direction</p> <p>2. Longitudinal</p>		<p>Room temperature Température ambiante - Raumtemperatur</p> <p>Yield strength Limite d'élasticité ReL</p> <p>250</p>		<p>Tensile strength Résistance à la traction Rm</p> <p>520</p>	
<p>Direction (3) Direction</p> <p>3. Diagonal</p>		<p>Room temperature Température ambiante - Raumtemperatur</p> <p>Yield strength Limite d'élasticité ReL</p> <p>250</p>		<p>Tensile strength Résistance à la traction Rm</p> <p>520</p>	
<p>Impact strength test Essai de résilience Kerbschlagzähigkeit</p> <p>Charpy</p>		<p>Corrosion test Essai de corrosion Korrosionstest</p> <p>EN ISO 3651/2</p>		<p>Flattening test Essai de déformabilité Zugversuch</p> <p>40</p>	
<p>Location of the sample (1) Emplacement de l'échantillon Lage des Probenabschnitte</p> <p>1. Front - Avant 2. Back - Dos 3. Middle - Milieu</p>		<p>The delivery is in accordance with the order La livraison est conforme aux commandes Die Lieferung entspricht den Bestellungen</p>		<p>Organization inspection Organisation der Kontrolle Einschulungsabteilung</p> <p>16/01/2007 J. VANTRAPPEN</p>	
<p>Direction of the test pieces (2) Orientation des éprouvettes Probenrichtung</p> <p>T. Transverse - Transversal L. Longitudinal - Longitudinal</p>		<p>Marking, inspection and measurement without objection Contrôle de marquage, d'aspect et de dimensions: satisfaisant Prüfung der Kennzeichnung, des Aussehens und der Abmessungen: ohne Beanstandung</p>		<p>The Inspector Le Responsable Der Werkstoffbeauftragte</p> 	

ArcelorMittal

Mantelgeschweißte Stahl
ArcelorMittal - Belgium nv/na
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MILL CERTIFICATE BS EN 10204/3.1
CERTIFICAT DE RECEPTION NF EN 10204/3.1
ABNAAMBRUIKZEGENIS DIN EN 10204/3.1
Approuvé et approuvé approuvé AD2000-WG - TRD 100 statement W B 603
certified acc. PED (97/23/EC) by TÜV, NO 0035

N-NF-N 20080913390

Manufacturer's work order number
N° de la commande usine produites
Werkauftragsnummer
704751930/01-20550/369/01
Backlog 1155120080913390
Product - Produit - Designation

Buyer's name
Cachet de l'export
Stamp of the
Werkstoffversandgeber

Purchaser and/or consignee
Client ou destinataire
Besteller und/oder Empfänger
GRUPEN & ROMANO SPA

Purchaser's order number
N° de commande client
Kaufbestellnummer
ORD 17/0191

Customer article number
N° d'article client
Artikelnummer des Kunden

COILS, HOT-ROLLED, ANNEALED AND STRENGTHENED
COILS, LAMINÉ A CHAUD, REÇUS + DÉCHÈS
COILS, HARTGEZOGEN, GEWELDTE UND GEBETZTE

VIA FACTED B-10
26094 CORSICO (BI)
ITALIE

Steel designation
Designation de l'acier
Stahlschmelzung
S10080-1/00 NBR 1.4307/L.4301
Agent A 240 (0) 0381 3020 3045/304
Agent BA 240-04 3020 3045/304

Width
Largeur
Breite
10
100
100

Steelmaking process
Méthode de fabrication de l'acier
Stahlerstellungsvorgang
Elektro- und VOD/AGD-Continuous-casting
Four- and VOD/AGD-Continuous-casting
Elektro- und VOD/AGD-Stranggießanlage
Any special requirements
Prescriptions particulières - Besondere Anforderungen
K2 GRNT 1.8-2

Product delivery condition
Etat de livraison du produit
Lieferzustand
Solidus treated
Type of annealing
Logementage
Treated in Air fired
Gebrauch Luft


AD 2000 W2/2006 -- AD 2000 W10/2003 -- EN 13445-2/2002

Identification of the product Identification du produit - Identifizierung des Erzeugnisses		Dimensions Dimensions - Abmessungen			Number of pieces Nombre de pièces - Stückzahl	
Coil n° N° de bobine - Band Nr	Width N° de bobine - Band Nr	Thickness Epaisseur - Dicke	Width Largeur - Breite	Length Longueur - Länge	Net weight Poids net - Netto-Gewicht	
80804010	808040	10.00 mm	1500.00 mm			8500 KG

CHEMICAL ANALYSIS - ANALYSE CHIMIQUE - CHEMISCHE ZUSAMMENSETZUNG											
	C	Si	Mn	Ni	Cr	Mo	Ti	N	S	P	
Required limits Anforderungen	0.030	0.75	2.00	0.00	10.00			0.100	0.020	0.040	
Actual analysis Analyse actuelle	0.022	0.43	1.40	0.02	10.40			0.064	0.001	0.021	

Tests to verify batch and quality have been carried out: OK
Tests de vérification de la conformité de la livraison: OK
Versuchungsprüfung wurde durchgeführt: OK
Batch test results are satisfactory EN ISO 7438
Les essais de pillo sont satisfaisants 1.80
Die Ergebnisse der Abnahmeprüfungen entsprechen den Vorschriften

MECHANICAL PROPERTIES - PROPRIÉTÉS MÉCANIQUES - MECHANISCHE WERTE EN 10002-1															
Location (1)		Room temperature - Température ambiante - Raumtemperatur				Test Temperature									
Direction (2)		Yield strength Résistance à la traction Dehnungs- MPa		Tensile strength Résistance à la traction Zugfestigkeit- MPa		Elongation after fracture (A) Allongement après rupture Bruchdehnung %		Hardness Pureté Haute		Yield strength Résistance à la traction Dehnungs- MPa		Tensile strength Résistance à la traction Zugfestigkeit- MPa		Elongation after fracture (A) Allongement après rupture Bruchdehnung %	
Required Anforderung		Rp 0.2 %		Rp 1 %		A5		HRB C10		Rp 0.2 %		Rp 1 %		A5	
1	T	210		250		45		45		B2					
	Obtained Obtenu	325		358		50		62		B3					
	Required Anforderung	C11		C14		C12		C13		C15		C16		C18	
Impact strength test Essai de résilience Kerbschlagzähigkeitstest		Corrosion test Test de corrosion Korrosionstest				KV 2 (J) / B (J)								Sample Echantillon	
C61		C64		EN ISO 3654/2		# OK B1		C50		C51		C52		C53	
						Internal cleanliness :				A :		B :		C : D :	

 ArcelorMittal Correspondence: ArcelorMittal Genk - Stainless Europe Swinnenwilleweg 5, 3600 Genk, Belgium Tel. +32 (0)89 30 21 11		A01 MILL CERTIFICATE BS EN 10204/3.1 CERTIFICAT DE RECEPTION NF EN 10204/3.1 ABNAHMEPRÜFZEUGNIS DIN EN 10204/3.1		A02 Certified acc. PRD 97/23/EC Annex I § 4.3 by Certification Body 0036 of TÜV SÜD Industrie Service GmbH with certificate No.: 314/2007/MUC. Renounced of counter signature agreed by TÜV SÜD (9/5/2007). Confirmation letter from TÜV SÜD Industrie Service GmbH of 07/05/2010 about the uniformity of coils acc. AD 2000 W2 §4.1.1 AD 2000 W2/2008 - AD 2000 W10/2007 - RN 13445-2/2002		A03 EN 10204-3.1 ORIGINAL	
		A04 Approved acc. AD 2000-Merkblatt W0/TRD 100 by TÜV SÜD Industrie Service GmbH.		A05 Purchaser's order number N° de commande client Kundenbestellnummer 20/0153			
A06 Manufacturer's works order number N° de la commande usine productrice Werksauftragsnummer 80006011/04-24550/457/03.		A07 Surveyor's mark Cachet de l'expert Stempel des Werkssachverständigen AMSE		A08 Purchaser and/or consignee Client et/ou destinataire Besteller und/oder Empfänger GRIFFON & ROMANO SPA VIA TACITO 8-10 20094 CORSICO ITALIE		A09 Customer article number Numéro client Artikelnummer des Kunden	
A10 Product - Produit - Erzeugnis COILS, HOT ROLLED, ANNEALED AND PICKLED COILS, LAMINE A CHAUD, REÇUTS + DÉCAPÉ COILS, WARMERWALZT, BEGLÜHT UND GEBRÜHT		A11 Steel designation Désignation de l'acier Stahlbezeichnung ASME SA 240-2008 type 304L/304 ASTM A 240-2009 type 304L/304 EN 10028-7-2008 1.4307/1.4301 DIN 10088-2-2005 1.4307/1.4301		A12 Steelmaking process Mode d'élaboration de l'acier - Stahlherstellungsverfahren Prod. process: Electric arc furnace - VOD/AOD - Continuous casting Proc. fabric.: Four à arc - VOD/AOD - Coules continue Fertigungsverfahren: Elektro-Ofen - VOD/AOD - Stranggussanlage		A13 Product delivery condition État de livraison du produit - Lieferzustand Solution treated Hypertrome: Lösungsgelbgeschreckt: 1050 C	
A14 Any supplementary requirements Prescriptions supplémentaires - Zusätzliche Anforderungen		A15 Forced air - Air forcé Gebläse Luft		A16 NACHRICHTEN / ISO 15156-3 / ISO 15156-3 // ATTESTATION PRD 97/23/EC PAR TÜV SÜD		A17 Identification of the product Identification du produit - Identifizierung des Erzeugnisses	
B01 Coil n. N. Bobine - Band Nr. 03713924		B02 Heat n. N. Caille - Schmelz Nr. 037139		B03 Thickness Epaisseur - Dicke 12.00 mm		B04 Width Largeur - Breite 1250.00 mm	
B05 Length Longueur - Länge		B06 Number of pieces Nb de pièces - Stückzahl 1		B07 Net weight Poids net - netto Gewicht 11130 KGG		B08 CHEMICAL ANALYSIS - ANALYSE CHIMIQUE - CHEMISCHE ZUSAMMENSETZUNG	
C01 Required - Exigé Anforderung.		C02 Cast Analysis Analyse coulée Analyse Schmelze		C03 C 0.030		C04 Si 0.75	
C05 Mn 2.00		C06 Ni 8.80 10.50		C07 Cr 18.00 19.30		C08 Mo 0.100 0.015	
C09 Ti 0.071 0.002		C10 N 0.015 0.031		C11 S 0.002 0.031		C12 P 0.002 0.031	
C13 Tests to verify batch and quality have been carried out : OK Tests de vérification de la conformité de la nuance fournis : OK Verwechslungsprüfung wurde durchgeführt : OK		C14 Alfa Profile		C15 Delta Profile		C16 Tests to verify batch and quality have been carried out : OK Tests de vérification de la conformité de la nuance fournis : OK Verwechslungsprüfung wurde durchgeführt : OK	
C17 Location (1) Direction (2) Required Exigé Anforderung		C18 Yield or proof strength Limite d'élasticité Dehngrenze MPa		C19 Tensile strength Résistance à la traction Zugfestigkeit MPa		C20 Elongation after fracture Allongement après rupt. Bruchdehnung %	
C21 Hardness Dureté Haute		C22 Yield or proof strength Limite d'élasticité Dehngrenze MPa		C23 Tensile strength Résistance à la traction Zugfestigkeit MPa		C24 Elongation after fracture Allongement après rupt. Bruchdehnung %	
C25 Impact strength test Essai de résilience Kerbschlagzähigkeitstest		C26 Corrosion test Test de corrosion Korrosionstest		C27 Impact strength test Essai de résilience Kerbschlagzähigkeitstest		C28 Corrosion test Test de corrosion Korrosionstest	
C29 Location of the sample (1) Emplacement du témoin Lage des Probenabschnittes 1. Front - Début - Anfang 2. Back - Fin - Ende 3. Middle - Milieu - Mitte		C30 The delivery is in accordance with the order La livraison est conforme aux exigences de la commande Die Lieferung entspricht den Bestellbedingungen		C31 Packing list Avis d'expédition Lieferscheinnummer 2010046294-20550		C32 Organisation inspection Organisme et/ou service contrôle Überwachungsabteilung Quality Department 9/11/2010 The inspector Le responsable Der Werkssachverständige S. Hillen	
C33 Direction of the test pieces (2) Orientation des éprouvettes Probeorientierung T. Transverse - Travers - Quer L. Longitudinal - Long - Längs		C34 Marking, inspection and measurement : without objection Contrôle de marquage, d'aspect et de dimensions : satisfaisant Prüfung der Stempelung, des Oberflächenaspekts und der Abmessungen : ohne Beanstandung		C35 Marking, inspection and measurement : without objection Contrôle de marquage, d'aspect et de dimensions : satisfaisant Prüfung der Stempelung, des Oberflächenaspekts und der Abmessungen : ohne Beanstandung		C36 Marking, inspection and measurement : without objection Contrôle de marquage, d'aspect et de dimensions : satisfaisant Prüfung der Stempelung, des Oberflächenaspekts und der Abmessungen : ohne Beanstandung	

OFFICINE BINDA & GALPERTI S.r.l.
PRODUZIONE FLANGE - FORGIATI - GIUNTI ISOLANTI
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 23813 CORTENOVA (LC) Italy - Via. Roma, 43
 Tel. +39 (0)341.904.333 - Fax +39 (0)341.901.900
 http://www.officinebindaegalperti.com
 e-mail: obg@officinebindaegalperti.com



CERTIFICATO DI COLLAUDO /
TEST CERTIFICATE
 EN 10204 3.1.
 ISO 10474 3.1.B.
 N. / NR. **6316**
 DATA / DATE **10/05/2010**

D.D.T. N. / DELIVERY NOTE NR
967
DATA / DATE
07/05/2010



Spett. / Messrs
I.M.G. INTERNATIONAL di Rossetto Andrea
 Via Maserò n. 57
 - 10010 - SCARMAGNO (TO)
 rossetto.andrea@imginternational.it

Page 2 of 2

Ordine Order	Colata Heat	Descrizione Description	Q.tà Q.ty	Materiale Material
	201508	Forged Ring OD 1500 x ID 1395 x H 105	50	A/SA105

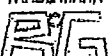

COLATA / HEAT	MATERIALE / MATERIAL	ACCIAIERIA / STEEL PLANT	T.T.												
201508	A/SA105	ABS	1												
ANALISI CHIMICHE - CHEMICAL ANALYSIS															
	C	Mn	Si	P	S	Cr	Cu	Ni	Sn	Mo	Ceq	Al	Ti	V	Nb
Min		0,8	0,15									0,015			
X	0,168	1,03	0,19	0,008	0,003	0,06	0,07	0,04	0,008	0,01	0,37	0,022	0,002	0,024	0,001
Max	0,22	1,35	0,3	0,035	0,04	0,3	0,4	0,4		0,12	0,43	0,05		0,05	
C.Eq; C _E = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15															
CARATTERISTICHE MECCANICHE - MECHANICAL CHARACTERISTICS															
	Sneramento	Rottura	Allungamento	Strizione	Resilienza	Durezza									
	Yield point R _s N/mm ²	Tensile strén. R N/mm ²	Elongation A%	Reduct Area Z%	Impact Test	Brinell hard HB									
Min	250	485	22	90		137									
X	341	495	30,8	72		147									
Max		655				197									
Test standard conforming to ASTM A370 - According to NACE MR 0175/03															

a) Trattamento termico / Heat treatment 1) Normalizzato a 920 °C / 1 h / 25 mm. e raffreddato in aria calma. Normalized at 920 °C / 1 h / 25 mm. and cooled in still air. 2) Solubilizzato / Solution treated and quenched. 3) Bonificato / Quenched and tempered.	4) Normalizzato / Normalized and tempered. 5) _____ b) I valori delle analisi chimiche sono ricavati dal certificato di Acciaieria. Chemical analysis values are taken from basic certificate.	c) Controllo visivo e dimensionale soddisfacente. Satisfactory visual and dimensional check. d) Acciaio elaborato al forno elettrico e salmato. Killed steel made by electric furnace.
TRADE MARK 	p. OFFICINE BINDA & GALPERTI S.r.l. 	COLLAUDO / INSPECTION Binda & Galperti S.r.l. Quality Department
		ENTE C. / INSPEC. AGENCY

OFFICINE BINDA & GALPERTI S.R.L. PRODUZIONE FLANGE - FORGIATI - GIUNTI ISOLANTI MANUFACTURE OF FLANGES - FORGED - INSULATING JOINTS 23813 CORTENOVA (LC) Italy - Via Roma, 43 Tel. +39 (0)341.901.333 - Fax +39 (0)341.901.300 http://www.officinebindaegalperti.com e-mail: obg@officinebindaegalperti.com	Azienda con sistema di gestione certificato da ISO secondo ISO 9001  	CERTIFICATO DI COLLAUDO / TEST CERTIFICATE EN 10204 3.1. ISO 10474 3.1.B. N. / NR. DATA / DATE	D.D.T. N. / DELIVERY NOTE NR. 506 DATA / DATE 14/07/2012
We certify that the above mentioned Descript material is comply with order requirements and above mentioned specifications.		Spett. / Messrs EURO SERVICE S.R.L. Via E. Fermi n. 29 - 27036 - MORTARA (PV) <div style="text-align: right;">Page 1 of 1</div>	

Ordine Order	Colata Heat	Descrizione Description	Q.tà Q.ty	Materiale Material
707/12	208432	Anelli OD 185 x ID 100 x H130 Vs. disegno	4	A/SA105N
707/12	208432	Anelli OD 1070 x ID 700 x H180 Vs. disegno	1	A/SA105N

COLATA / HEAT		MATERIALE / MATERIAL						ACCIAIERIA / STEEL PLANT						T.T.	
208432		A/SA105N						ACC. VENETE						1	
ANALISI CHIMICHE - CHEMICAL ANALYSIS															
	C	Mn	Si	P	S	Cr	Cu	Ni	Sn	Mo	Ceq	Al	Ti	V	Nb
Min		0,6	0,15									0,015			
X	0,17	1,181	0,261	0,01	0,007	0,071	0,162	0,101		0,021	0,41	0,031	0,002	0,026	0,001
Max	0,22	1,35	0,3	0,035	0,04	0,3	0,4	0,4		0,12	0,43	0,05		0,05	
C.Eq.CE = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15															
CARATTERISTICHE MECCANICHE - MECHANICAL CHARACTERISTICS															
	Snervamento		Rottura		Allungamento		Strizione		Resilienza		Durezza				
	Yield point Rs N/mm²		Tensile stren. R N/mm²		Elongation A%		Reduct Area Z%		Impact Test J -10°C		Brinell hard HB				
Min	250		485		22		30				137				
X	344		505		33,06		63,25		86 - 93 - 79		164				
Max			655								197				
Test standard conforming to ASTM A370 - According to NACE MR 0175/03															

a) Trattamento termico / Heat treatment 1) Normalizzato a 920 °C / 1 h / 25 mm. e raffreddato in aria calma. Normalized at 920 °C / 1 h / 25 mm. and cooled in still air. 2) Solubilizzato / Solution Treated and quenched. 3) Bonificato / Quenched and tempered.	4) Normalizzato / Normalized and tempered. 5) _____ b) I valori delle analisi chimiche sono ricavati dal certificato di Acciaieria. Chemical analysis values are taken from base certificate.	c) Controllo visivo e dimensionale soddisfacente. Satisfactory visual and dimensional check. d) Acciaio elaborato al forno elettrico e completamente calmato. Fully killed steel made by electric furnace.	
TRADE MARK 	p. OFFICINE BINDA & GALPERTI S.R.L. 	COLLAUDATORE / Inspector Binda & Galperti s.r.l. Out. y Department	ENTR. C. / INSPEC. AGENCY

ANNEX A4

**VISUAL EXAM. CERTIFICATE
DIMENSIONAL EXAM. CERTIFICATE**

OFFICINE SASPE S.r.l. ARESE (MI)		N.F. serial number 1916-1	SIGLA item 65MX1	FOGLIO NUMERO Sheet number
CLIENTE customer	DESMET BALLESTRA	N° ORDINE order No. 121266		COMMESSA N° Job No. 2F11 658/12 - 1916
IMPIANTO plant	SABIZ	DETTAGLIO detail ROTATING MIXER		DISEGNO N° Drawing No. 2F11.10.106
NORME rules	STD BALLESTRA	OPERATORE operator --	CERTIFICATO N° certificate No. 1916-1 / VD	FASE PCQ QCP phase --
** CERTIFICATO CONTROLLO VISIVO E DIMENSIONALE ** visual and dimensional check report				
<p>L'ATTREZZATURA È STATA CONTROLLATA DIMENSIONALMENTE RISULTANDO IN ACCORDO AL DISEGNO COSTRUTTIVO E ALLE TOLLERANZE</p> <p>The equipment has been dimensional checked and found in according to the construction drawing and tolerances</p>				
SPECIFICA N° specification No. PROCEDURE24 – DWG No. 2F11.10.106				
CLIENTE ISPETTORE Sig. customer inspector _____				
RESPONSABILE UFFICIO COLLAUDI OFFICINE SASPE s.r.l. inspector Mr. R. Lino				
ISPETTORE DEL _____ Mr. _____ inspector of				
ISPETTORE DEL _____ Mr. _____ inspector of				
ESITO DEL CONTROLLO result POSITIVO - positive				
NOTE _____ notes				
ENTE COLLAUDATORE inspection body DESMET BALLESTRA S.p.A. Inspector Gatti Davide 12/10/12		OFFICINE SASPE S.r.l. OFFICINE SASPE GROUP S.r.l. Via Senato, 10 - 20020 Arese (Milano) - ITALY P.IVA/C.F. Reg. Impr. 08774910155		DATA date

ANNEX A5

DECLARATION OF CONFORMITY

OFFICINE SASPE GROUP S.r.l.

Sede legale: Via Quintino Sella, 4 – 20121 MILANO

Sede Amministrativa: Via Senato, 10 – 20020 Arese (MI)

☎ 02/93583087 – 93583154 - FAX 02/93583154

e-mail: info@officinesaspe.com <http://www.officinesaspe.com>

C.C.I.A. Milano 1247163 – Tribunale 270020/6982/20 – P.IVA e C.F. 08774910155

DICHIARAZIONE DI CONFORMITA'

DECLARATION OF CONFORMITY

in accordo all'allegato II della Direttiva 98/37/CE

in accordance with annex II of 98/37/CE Directive

Dichiariamo sotto la ns. responsabilità che la progettazione, la fabbricazione, i controlli e le prove della macchina sotto specificata sono conformi alle disposizioni applicabili della Direttiva 98/37/CE.

We declare under our responsibility that the design, manufacturing, inspection and tests of the equipment listed below meet the applicable requirements of the 98/37/EC Directive.

Descrizione della macchina:

Equipment description

MISCELATORE ROTANTE DIAM. 1400 mm

ROTARY MIXER 1400 mm DIAMETER

N. Fabbrica: 1916-1

Serial no.

Anno di costruzione: 2012

Manufacturing year

Il manufatto è stato costruito in modo da costituire una macchina in accordo alla Direttiva 98/37/CE

The equipment is built to be incorporated in a plant in order to constitute a machine acc. to 98/37/CE Directive

Norme tecniche utilizzate:

Technical standards used

EN 292-1, EN 292-2

ISO 2372/3945

VDI 2056/2060

ISO 3740

EN 1050

Altre direttive applicate: /

Other directives applied

La macchina non sarà utilizzata prima della emissione della Dichiarazione di Conformità sec. la Direttiva 98/37/CE.

The unit shall not be operated before the 98/37/CE Directive Conformity declaration of the complete plant.

Luogo e data

Location and date

Arese (MI) 12 / 12 /2012

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Sede Amministrativa: Via Senato, 10 – 20020 Arese (MI)

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OFFICINE SASPE GROUP S.r.l.

Via Senato, 10 - 20020 Arese (Milano) - ITALY

P.IVA/C.F. Reg. Impr. 08774910155

ANNEX A6

INSTALLATION, OPERATION AND MAINTENANCE MANUAL

OFFICINE SASPE S.r.l.

OFFICINE SASPE S.r.l.

Sede legale: Via Quintino Sella, 4 – 20121 MILANO

Sede Amministrativa: Via Senato, 10 – 20020 Arese (MI)

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e-mail: info@officinesaspe.com <http://www.officinesaspe.com>

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INSTALLATION, OPERATION AND MAINTENANCE MANUAL

INSTRUCTION FOR USER
english version

Rotating mixer Ø1400 mm

OFFICINE SASPE S.r.l.

Sede legale: Via Quintino Sella, 4 – 20121 MILANO

Sede Amministrativa: Via Senato, 10 – 20020 Arese (MI)

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date:30 March 2004

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ISSUED BY

DATE

OFFICINE SASPE GROUP s.r.l.

Via Senato, 10 - 20020 Arese (Milano) - ITALY
P.IVA/C.F. Reg. Impr. 08774910155

OFFICINE SASPE S.r.l.

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date:30 March 2004

1_ IDENTIFICATION DATA

Manufacturer..... **OFFICINE SASPE GROUP S.r.l.**

Customer..... **DESMETE BALLESTRA S.p.A.**

Purchaser Order Nr...... **121266**

Job Nr...... **2F11**

Item..... **65MX1**

Model..... **MIXER 1400 mm Diameter**

Year of construction..... **2012**

Serial Nr...... **1916-1**

2_ PROPERTY OF THE INFORMATION

The information contained in this manual are reserved property. All rights are reserved.
This manual cannot be reproduced or copied, as a whole or in parts, without prior written consent of **BALLESTRA S.p.A.**. These documents are provided only for the use of the client whom the manual has been supplied to with machine, and can be used only for the installation, use and maintenance of the machine the manual refers to. The manufacturer recommends strict compliance with the instructions, procedures and recommendations of this manual and with the laws in force on the safety in the work place. This also refers to the use of the protection devices foreseen, both those integrated in the equipment and personal.
BALLESTRA S.p.A. states that the information of this manual is congruent to the technical and safety requirements of the machine the manual refers to. The manufacturer cannot be held responsible for any direct or indirect damages to people, objects or animals due to the use of these documents or of the machine in conditions other than those authorized or due noncompliance with the safety norms and recommendations of these documents.
The information of this manual particularly refers to the machine specified in sect. 1 IDENTIFICATION DATA.

In order to obtain other manual copies or updating, please contact **BALLESTRA S.p.A.**.
- Technical Dept. – fax n. ++39 02 58018449. For further information always contact **BALLESTRA S.p.A.**.

BALLESTRA S.p.A. reserved the right to modify or improve, without updating, the machine type and this manual.

3_ ASSISTANCE INFORMATIONS

For any need, please contact **BALLESTRA S.p.A.** – fax Nr. ++39 02 58018449.

4_ USE OF THE MANUAL

Please consult the relative chapter for any transportation, installation, use, maintenance and demolition operation. This manual and the enclosed documentation must be kept for the entire technical life of the equipment in order to consult it quickly when necessary.
If the equipment is sold as second-hand, this manual and the enclosed documentation must be supplied along with the product.

5_ PROTECTION FOR TRANSPORT, STORAGE, HANDLING

5.01 Transport and storage

The equipment has been protected for the transport and storage prior to erection as necessary against physical damage and / or corrosion which may occur due to the method and conditions of transport. Be sure that the storing location will not cause damages to machine protections.
Packing dimensions and weight are indicated on packing list.
Usually the machine is supplied completely pre-assembled.
Machine dimensions and weight are shown at assembly drawing (Annexe "A1" of the Manufacturing Report).

5.02 Handling

Verify that lifting devices are adequate to loads indicated on drawing and comply with the laws in force. All handlings of pressure equipment must be done with caution, to avoid damages and by qualified and authorized personnel, and always at soil for assistance and signals.
Only authorized personnel can stand near the handling area.
During loading and unloading operations lifting lugs shall be used with purpose to avoid the possibility of distortion of the equipment and any of its parts.
The lifting lugs are enough only for empty vessel.

6_ MOUNTING, INCLUDING ASSEMBLING

6.01 Installation of the equipment

The equipment shall be installed in accordance with applicable requirements of State or Local Authorities, and with applicable regulations.
Before installing the equipment personnel must check the integrity of the nameplate and all the information are well readable.

Personnel must control that the equipment has in good conditions and no damage has been occurred during transport and/or handling.

It is not allowed to support equipment by means of external piping.

Connect product inlet and outlet lines, and spraying nozzles piping.

Check drive chain tension and adjust it if necessary.

Check the lubrication drive chain, supporting rolls bearings and revolving surfaces.

Fit the graphite ingot in working position.

Connect the electric motor, check the mixer sense of rotation indicated by a red arrow.

6.02 Levels

The equipment shall be installed to the correct levels and vertical lines within the limits agreed with the user and using the setting screws provided at machine legs (M12).

Then tighten the M24 foundation bolts, and secure the locking nuts, checking again the horizontality.

6.03 Assembly

The equipment has to be assembled complete with all its parts included internally fully assembled to the equipment.

The assembly of equipment to its connections must be done by well trained personnel, the type of connections are:

- flanged connection
- threaded connections

The flanged connections must be ensured with gaskets and bolt indicated on the piping drawings if not already forecast on the supply.

7_ PUTTING INTO SERVICE

The equipment must be fixed to its supports before operating.

Qualified personnel should check at least:

- Correct position of the equipment;
- No material has been left during assembling in the internal of the equipment;
- All protection nets and chains are installed;
- All the connections are fully and correct assembled;
- All the joints are correct fitted;
- All the bolts are correct closed;
- The foundation bolts are all in place and correct closed;
- All the safety instrument (nets, chains and emergency stop buttons) are in place and correct assembled;
- No evidence of damage to any parts of the equipment;
- Safety devices and alarms are connected on the whole of the equipment;
- The whole equipment is connected to appropriate grounding.

Starting the operating of the equipment must be done according to the plant engineering procedure.

In case of use the equipment in areas containing explosive atmosphere and/or inflammable zone, the user must be provided necessary measures for the equipment to ensure its complete safety.

All the information regarding the operating conditions (pressure and temperature) are indicated on the nameplate installed on the equipment.

Operating the equipment to proper design data indicated on the nameplate must always be done by a qualified personnel.

8_ USE

The use of the equipment should be carried out only by specialized personnel.

The use of the equipment is strictly obliged to the data indicated on the nameplate and on the drawing.

It is forbidden to use the equipment for other scope and other pressure and temperature different from the ones indicated on the nameplate and drawing.

Using the equipment in ways which differ from those which it has been designed for, represents an anomalous condition and could therefore damage the structure of the equipment.

It is strictly forbidden to open any closure, joints or other parts during operating.

It is strictly forbidden to tight bolts or thread during operating.

It is strictly forbidden to use the equipment without its protections and without the safety equipment it is provided with, especially without the panels that block the access to the internal parts.

During operation only authorized personnel can stand near the equipment and only after having followed all the safety procedure instruction issued by the user.

9_ REPAIRING

Any repairing on the equipment must be carried out by qualified personnel.

Under full responsibility of user it is allowed repairing or alterations as long as are made according to this manual and rules indicated in the National Board Code latest edition and conform to the local laws.

10_ PROTECTIVE DEVICES AND OTHER FITTINGS

Operating prior of installation of safety devices is prohibited.

Protective devices shall be conform to the law requirements of the Country of Constructor where the equipment shall be installed and, where required, acceptable to the Inspecting Authority competent for the survey of the plant in service.

When any such device is not provided by the manufacturer, the user shall be responsible for ensuring that it is supplied and fitted prior to placing the equipment into service. Design of protective devices which are not provided by the manufacturer of the equipment is full responsibility of the user.

Protective devices and fittings shall be:

- located and installed so that they are readily accessible for operation, inspection, maintenance and removal;
- arranged to afford maximum protection against accidental damage.

11_ REMARKS AND RESIDUAL RISKS

Please refer to the relevant section of this manual for the specific safety instructions for each subject. The specific safety instructions are marked by the following conventional symbols:

D Danger

The danger symbols indicate those procedures and precautions which, if not respected, could cause physical damages to the user's.

The manufacturer cannot be held responsible for any damages to people due to noncompliance with these norms.

C Caution

The caution symbols indicate those procedures and precautions which, if not respected, could cause damages to the machine or other goods.

The manufacturer cannot be held responsible for any damages to machine and other goods due to noncompliance with these norms.

This section has the purpose of reminding in general the risks deriving from the use of the machine.

11.01 Mechanical risks - Weight

D Danger

The machine weight is indicated on the assembly drawing and on the shipping documents.

D Danger

Always consider machine weight during machine unloading operations.

C Caution

Always consider the total weight of the machine including the complete filling with water or with the processed product when dimensioning the supporting

structure.

The dimensioning for total weight is also sufficient for the stability against dynamic forces.

11.02 Mechanical risks – Moving parts

D Danger

The moving parts are enclosed in protective guards.

Do not remove guards except for authorized maintenance operations.

Tampering with the protections and the safety devices is dangerous for the people using the equipment and for those exposed to it.

D Danger

During authorized maintenance operations make sure that the machine can't be started from central control room or other remote location.

D Danger

If there is possibility of unauthorized maintenance operations, fit microswitches on protective guards, in order to break the current to the electric motor.

C Caution

Do not operate the machine when an abnormal vibration is produced; an excessive vibration level can produce damage to the supporting structure and to unit.

11.03 Electric risks

D Danger

Follow electric motor installation and operating instructions.

D Danger

Choose the right electrical protection for the explosive areas.

12_ TECHNICAL DESCRIPTION AND SAFETY MEASURES

12.01 Drawings and machine components list

In Annexe "A1" of the Manufacturing Report you find:

- assembly drawing
- sectional drawing
- machine components list, with reference to the sectional drawing

12.02 How the unit works

With reference to Machine Data Sheet, the powder enters the unit through the nozzle S1, then it is mixed and added with the liquid from the spraying nozzles (the nozzles, depending on Process Specification, can be steam heated) located at S8 inlet nozzles; the product is thus granulated by the action of liquid and rotation.

12.03 Construction materials

They are listed in the assembly drawing and in the machine components list (see Annexe "A1 of the Manufacturing Report").

12.04 Feed and ambient conditions

They are defined at Ballestra's Process Specification, in doubt please contact M/s Ballestra.

12.05 Technical data

They are defined at assembly drawing (see Annexe "A1 of the Manufacturing Report").

12.06 Protections

See sect.11

Please note that the unit is supplied with safety barriers, to be locally installed, in order to prevent the access to the dangerous area.

NEVER RUN THE MACHINE WITHOUT INSTALLING THE SAFETY BARRIERS.

12.07 Noise

In test-run empty conditions, the unit does not exceed a sound pressure level of 78 dB(A).

This value refers to the machine emission, not to the operator exposure.

The measure is done with a sound pressure level meter HD 9018, class of precision 1 as per IEC 651 and IEC 225 codes, class of precision 2 as per IEC 804 code, at 1 m from the machine surface and at 1.60 m from soil.

13_ PREPARATION TO START-UP

13.01 Check the cleaning of all fixed and rotating parts.

13.02 Check the oil level in the reducer.

13.03 Fit the graphite ingots into the cleaning device housing.

13.04 Lubricate the bearings.

13.05 Check the mixer sense of rotation (red arrow).

13.06 Start the unit at low frequency and set the correct operating frequency (please consult M/s Ballestra Process Specification).

13.07 Start feeding the machine according to M/s Ballestra Process Specification.

14_ MAINTENANCE, DISMANTLING AND REASSEMBLY

Maintenance must always be done at room temperature and atmospheric pressure. It is strictly forbidden any maintenance to either the equipment, components or instruments during the operating of the equipment. The return to operating must be done after verifying that all the procedure indicated by the plant engineering are satisfied.

14.01 Maintenance program

14.01.01 The parts more likely to wear are the revolving surfaces (if the unit will be operated in a dusty environment), the supporting bearings, the seals on rotating parts (and surfaces where the seals slide), and the drive transmission components (motor, speed reducer, chain and sprockets).

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14.01.02 The event of an unpredictable failure for parts subject to wearing has always to be considered, for example for wrong operations or for negligence in operation.

We suggest having in stock always at least a set of spare parts, if not immediately available from commerce.

We suggest to benefit as much as possible from the scheduled plant shut-downs controlling in these occasions the most part of components, considering the priority at Tab.14.1 here below, showing the most probable life of the parts when working in normal conditions (preventive maintenance). The actual life can differ even a lot from that in Tab.14.1, due to negligence or thanks to particularly good working conditions.

TAB.14.1 – MOST PROBABLE LIFE OF COMPONENTS

COMPONENT	MONTHS
Bearings	24
Gaskets subject to friction	6÷12
Hardened parts subject to friction	36
Chain	24 (depends on lubrication)
Speed reducer mechanics	see reducer instructions
Electric motor mechanics	see motor instructions

14.01.03 Hereafter you find our recommended maintenance check list.

Daily : ● Check for revolving surfaces lubrication conditions

Weekly : ● Watch for oil leaks from reducer

Monthly : ● Lubricate the rolls bearings

Yearly : ● Have an internal inspection of the machine

Note: for motor and reducer consult the relevant manuals.

14.02 Lubrication

14.02.01 The lubrication of the bearings must be done using always the same kind.

The recommended type can be chosen between the following ones or equivalent (TAB.14.2) :

TAB.14.2 – LUBRICANTS FOR BEARINGS

BRAND	TYPE
Vanguard	Liko 0
Agip	MU/EP3 (Original)
Esso	Beacon n.2
Shell	Alvania n.2 / n.3
Mobil Oil	Mobilux EP 2

14.03 Dismantling and reassembly

C Caution

Before each intervention on the machine read carefully the related instructions and refer to the sectional drawing.

C Caution

Before each dismantling the recommended spare parts should be in stock (sect.11).

14.03.01 Chain removal

- Remove the protection covers and disconnect the removable chain link.

14.03.02 Driving unit removal

- Remove the screws from gear reducer basement.

14.03.03 Toothed crown removal

- Remove the chain as per 14.03.01.
- Remove the screws and the three pieces crown.

14.03.04 Replacement and maintenance of the spraying nozzles

- Disconnect and remove the holder flanges at nozzles S7 and S8.
- The spraying nozzles can be serviced and replaced according to the components list at M/s Ballestra Process Specification.

14.03.05 Replacement of gaskets

Dwg. SB-PRS-00002 sheet 1 of 4.

- GASKET pos.17

Remove entirely the hopper charge (pos. 4) and the screws of ring gasket and replace the gasket.

- GASKET pos.18

Remove entirely the hopper dish (pos. 5) and the screws of ring gasket and replace the gasket, removing the beam pos.13 of Dwg. SB-PRS-00002 sheet 4 of 4.

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15_DEMOLITION

The equipment can be demolished by qualified personnel only.

Disactivation of the equipment :

once the equipment has reached the end of its technical and operating life, it must be disactivated.

The equipment must be disactivated

and put in the condition of not being used for the purposes which it had originally been designed for.

However, it must allow the reutilization of the raw materials which it was built with.

The equipment is made of non biodegradable materials. It must therefore be brought to an authorized centre for its disposal.