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Colines[®] news is a free monthly newsletter having the intent of keeping you constantly www.air-bubble.com updated on innovations and technological developments of the companies belonging to www.weldingmachinery.it GRUPPO COLINES HOLDING. The target of our newsletter is to inform without causing any "inconvenience" and without invading your mailbox. Accordingly, this newsletter will be issued every month, easy and quick to download and providing immediate understanding.

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Holding









elav



no. 4 - year 2009

Innovative and high performing lines for embossed and breathable film

Compact layout for 5-layers Barriercast[®] line in Russia

New Barrierblown[®] line now in production in Italy

0 Vietnam moves forward with Colines® extrusion line

ELAV: In-Box Electrical System

Production starts in France with a BubbleGuard® Board line

Champagne caps in extrusion coating

Dear Sirs,

in a period of economical disease, Colines[®] strengthens the tradition of tech nological excellence of its extrusion lines focusing on innovation andquality. Any components of our lines are basically manufactured in Italy and/or in the western countries focusing on the reliability of our products and not on price competitiveness by pursuing the best cost/benefits. Accurate quality controls and certified procedures according to UNI EN ISO 9001:2000 complete this company policy.



The other main focus is customer's satisfaction. Our Handrollex[®] line for the manufacturing of manual and machine stretch rolls directly in line is the answer to the requests of a more and more differentiated market. With 18 lines sold all over the world Handrollex[®] demonstrates to be an effective answer. The same, Colines[®] offers a 360° service before and after delivery: a teleservice assistance on the plants to identify problems in real time represents one of our most innovative technological solutions. What above are of course just some of our topics. Many other news will be introduced to you by our area managers.

Look at the future with us!

E. Peccetti Managing Director

Colines held a Spanish-speaking agents meeting



The annual meeting of the agents of South America and Spain with the COLINES®'s staff took place from May 6 to 9. This meeting allowed the discussion of various topics of technological nature and moments of exchange of views about the respective markets. In view of the general and widespread economic growth of the involved countries, COLINES® updated and prepared their agents to provide the correct indications about the most modern solutions in flexible packaging. This has been possible thanks to a tight calendar during which the agents visited all the plant manufacturing factories and the film making facilities of the group. The COLINES® staff thanks their representatives: Comercio Digital (Argentina), Multichem (Brazil), Plasti Mac (Chile), Ravarco (Colombia/ Ecuador), Pol Maq (Mexico), Dibipack (Peru), PlastiMac Iberica (Spain), Soflex (VEN), for the commitment and the seriousness they showed.

A real vertical service for Colines[®] customers

Strong with the awareness that supplying an extrusion line means putting at disposal a complete service from the first contact, Colines® offers to its customers a step-by step assistance allowing them to begin production on their new machine expertly and efficiently from the first day. Welcoming our customers with our motto, "The power of Synergy[®]", we grant them a unique and real vertical service, as our company belongs to a group owning also film production facilities. Our knowledge is therefore based on real production tips and it is consolidated through a 40 years long engineering experiing the workforce of the customer as concerns mechanical and electronic parts, basic process and problem analysis. The average instruction period is of 3 weeks and includes experience in production facilities. The commissioning of a Colines[®] line, performed by our team of experts and specialists, includes dry and wet test at Colines[®] and customer's facilities. But supplying machines is just a part of the knowledge we transfer to our customers; we offer them a deep know-how on market demand and flexible packaging applications. The Colines[®] service is completed with an efficient and con-



ence of advanced technological solutions. Thanks to the structure of our group, our customers enjoy of a unique pre-marketing service, which is particularly useful speaking of coextruded film lines, as this pre-marketing activity makes the business start even before line's delivery. The supply of a plant is completed with a specific training service instructstant after-sale assistance including a mechanical/electronic support 365 days/year, even through advanced teleservice system, and an updating service with check-ups and proposals of the most suitable updating solutions as concerns, energy saving, output boost and speed increase to keep our lines competitive and top performing.

Colines[®] technical assistance

The new e-mail technical service (service@colines.it) addressed to all clients using Colines[®] extrusion lines is now in function. Thanks to the teleservice our efficient software team is able to intervene



in real time in the control parameters of the machine and to solve possible problems in a short time and directly from the pc.

Besides Colines[®] team service, we remind the strategic associated company Elav, which joinedColinesHoldingaboutoneyearago, and, over the last 30 years has been dealing with electronic engineering and service for all the Colines[®] lines.

New agent for Turkey

We are pleased to introduce to your attention the agency EKSIM PLASTIK MAKINA that starting from now will represent Colines[®] on the Turkish market.

Eksim Plastik Makina, a company established in 1997, offers technical and engineering support thanks to the company structure with different offices on the area.

MR. MEHMET VARAN (mvaran@eksimplastik.com) is the contact person in case you are looking for innovative extrusion solutions for CPP cast lines, barrier film cast lines, stretch film, hygienic film, extrusion coating, air-bubble film, blown film and PVC gaskets.



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New horizons for stretch film market



Stretch film, the flexible packaging solution for excellence (i.e. most commonly used) grows more and more in terms of global consumption with an average increase percentage of approx. 7% a year, even if the financial crisis of the moment is not en-

couraging both for investors and consumers. For this reason all the protagonists of the production process, starting from the raw materials giants down to the small converters, are taking immediate corrective action in order to preserve their own position on the background. For example the cost of the raw materials halved progressively if compared to the last year's peaks and many converters invested in new technologies in order to reduce the operation costs as well as to better fulfil the market's requests.

Generally speaking stretch film is produced in coextrusion on cast film lines (i.e. equipped with a flat extrusion die), which are normally preferred to the blown film lines thanks to their higher output. The market offers at the moment 3 different film versions: jumbo, manual and automatic, even if the first one is fundamentally used as a link for the further conversion in manual or in automatic version. "Jumbo" is the execution of the mother reel which is mainly 450-500 mm wide and has a diameter of 500 mm. On the contrary the diameter of the automatic as well as of the manual reels is of

HAND

240-250 mm for the first ones and of 80-150 mm for the second ones. These last ones are the formats which the end user asks for, as the jumbo reels have to be unwinded and rewinded in any case in the smaller executions. The market registers anyway a conspicuous evolution and therefore it asks, also for a commodity such as stretch film, for "special" products with high performances





(for example power and super-power). There exists no more (such as it was in the past) a unique blend or a few blends for stretch film, but there is a special blend for each market and this determines the characteristics of the film and it varies non only for the kind of raw materials but also for execution, thickness and colour.

As a consequence, the volumes of the production lots tend to decrease by splitting in several variants. The dreams of many producers are shattered in this way: their wishes for long productions, possibly always with the same materials, are dashed. In

the same way this process puts in trouble also who had organized its production only with structures able to fulfil high volumes of the same product. This leads automatically to a great difficulty to enter the markets with small lots of different productions which are anyway rich the same.

The process of market deep differentiation for a product such as stretch film is the reason for which producers must evolve according to the times' and market's evolution.

Flexibility will be the winning choice for those who wish to exploit

MANROLLEX®: the easiest way to produce manual stretch film

Colines® completes the family of its stretch film lines with the last born version Manrollex[®], 1000 mm wide with an output of 450 kg/h. The first range line equipment grants a perfect winding thanks to the performances of the Handspeedy[®] winder and a trims recovery up to 40% of the produced film thanks to Bigmouth[®] refeeding system. Compact in its short layout and high performing, Manrollex[®] is the right choice for the customer moving the first steps in the stretch film market.

the possibilities offered by a growing market which is opening new horizons. Breaking with the idea that stretch film finds its only application with pallets and considering the full range of applications will make the difference. New products such as film for fastest packaging machines or film wood and metal wrapping must not be forgotten, as they are no more market niches, but increasing branches which are becoming more and more profitable. The same way the old way of thinking that plain stretch film is just stretch film known up to now has to be put aside. Manufacturers have to consider at least the following main types of stretch film: Standard stretch film for semi and fully automatic pre-stretch machines up to 150%

Power stretch film for fully automatic pre-stretch machines up to 250% -300% (high speed machines). Hand stretch film for manual pallet

wrapping (huge market) Top sheet film protects the top of the pallet.

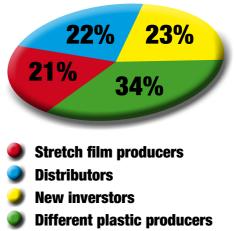
What above is confirmed by the fact

that up to approx. 3 years ago the plants' manufacturers tended to offer extrusion lines for "jumbo" formats, also with widths up to 4 m, and this favoured a higher output. But face to a higher output there is anyway an enormous loss as concerns flexibility, due partly to the fact that each production change determines a production scrap which is as higher as the line's dimensions are higher. This is an unacceptable condition for the present-day market as the end customer does not want to pay the production scraps. Furthermore, the "old" converting process has the disadvantage to charge the film producers with additional costs such as the necessity to own a big factory in order to house big size lines, a complex and expensive raw materials feeding system, a stock for the finished product and an area for slitting with the relative slitting machines and a dedicate staff to operate on them. It is easy to understand that the only way to increase the operation margin in cases such as this one is rationalizing the production's costs and trying to have the smaller number of production changes, even if we remarked how this market condition is difficult to be obtained.

But if the market asks for the manual and the automatic format, why producing the Jumbo format which is bigger to reduce it and to make it more expensive?

The limit was basically due to the winding technology of the extrusion lines.

This problem does not exist any more as we studied a solution to wind manual stretch film reels directly in line. After this premise, attention must be focused on a relevant detail: by winding manual stretch film reels, the winding station works with a nonstop process also up to 240 reel change a hour. This involves an engineering of high level together with a precise mechanical construction in order to make the system balanced and long-lasting. Other constructors too followed our steps by elaborating their own solutions. Among these manufacturers Colines® started with this study and with the project of such plants in 2005 and began the marketing of these extrusion lines in 2006 with the dedicated brand **COLINES** With the purpose of justifying a project investment which lasted several years a marketing analysis was realized starting from the database Colines® developed in years of activity. From this analysis emerged the datas in the graphic.



To this day 18 lines have been sold all over the world and installed in Africa, America, Asia and Europe (just Oceania is absent). The secret which allowed such a success is mainly the way of thinking standing behind the project of the *WHANDrollEX*® extrusion lines (this is the name of the line). The plant, which in its smaller version, has a **useful width of 1000** mm, does not need any slitting machines as it produces manual as well as automatic stretch film reels directly on 2" and 3" cores, is completely automated and it allows to be managed by only one operator, presents a compact layout



stretch film

which stands out from an analysis of "space-saving" which is useful exactly to those customers who have at their disposal limited installation spaces.

The production changes are really very quick, if compared to the traditional change times of the lines wider than 2000 mm (where during the production changes also the scraps begin to be remarkable).

With the best production conditions, the power consumption is less than 0,50 kW/kg and this represents a remarkable cost reduction in a field where up to a few years ago the incidence costs were really much higher.

Finally, our sister company Elav developed a dedicated software for this line which allows a global management of any single part composing the plant: from the dosing system to then reel's unloading. It is a totally integrated supervision system which grants a remarkable stability of the line, in the whole thickness range.

The future of the stretch film market is based mainly on the following features which manufacturers have to consider in any case:

- Flexibility, first of all, in order to follow the requests of a market which is more and more differentiated and continuously evolving
- Money saving as concerns reducing of the scraps to minimum, avoiding the off-line passages which are now performed in-line, granting so time as well as resources saving
- Cutting of the power consumption
- Guarantee of high guality and of high performances also on the low thickness
- Differentiation of the product according to the applications. Stretch film is no more a monoproduct.

www.colines.it •



Innovative and high-performing lines for embossed and breathable film





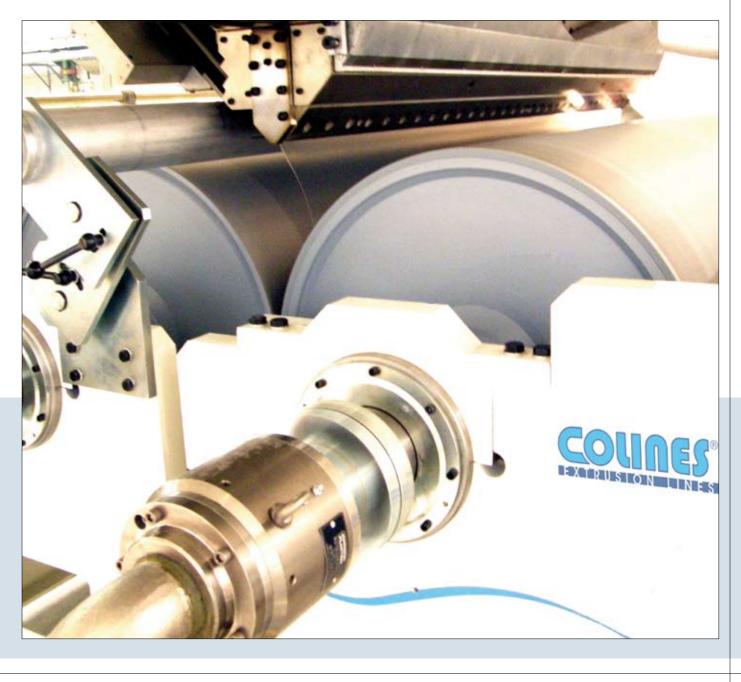
Breathable film cast line soon in delivery

Soon Colines[®] is going to deliver a breathable film line, 2000 mm wide. The line will be also shown in Open House at our factories in order to allow to all the interested customers to appreciate the quality of this innovative plant. The new generation of our breathable film cast line with embossing unit, with the possibility of single or double stage mono-orienting device and optical web inspection, offers to our customers a technically advanced development as a result of an years long experience and research in the field of cast lines for hygienic/textile application. It is the concept of breathable film standing behind the project which makes the difference. The film produced with this line let air as well as moisture pass through but not water. This peculiarity makes the breathable film the right solution for several applications, in the most various fields, from footwear to roofing, from medical clothing to gloves from apparels to baby diapers and sanitary napkins. For this last application the line is equipped with an embossing unit allows to produce also embossed film.

The test-run of our line DIAPER-CAST[®] for the manufacturing of cast embossed film for hygienic and diapers field is taking place in these days. It is a line of highest technology, the quickest available on the market as it reaches a production speed of 400 m/min.

The line has a useful width of 2000 mm and grants a net production of 960 kg/h considering a film thickness of 20µ.

The line is equipped with 3 extruder, automatic extrusion die as well as 5 layer feed-block Cloeren, gravimetric dosing system with 18 components, 6 for each extruder, thickness measurer, single face corona treatment and winder for reels dia. 600 mm. The line allows to realize 20 in-line cuttings for the production of 19 finished reels. The added value of this line lays in the cooling system on the rubber coated pressure roller which





is realized with a dry technology and not a water bath one, avoiding in this way the problem standing out from this last technology.

The line will be presented in Open House on February 24 and 25 at our facilities in Novara in order to allow to anybody is interested to appreciate the characteristics of this innovative plant.

For any further details please do not hesitate to contact us.

Barrierblown® goes Indian



An important 5-layers blown line, type Barrierblown[®], is now in production on the Indian manufacturing barrier film with EVOH and polyolefin based film for stretch hood film for example. The line, 2200 mm wide, is equipped with 2 extruders, dia. 80, 1 extruder, dia. 50 and 1 extruder dia, 65 and with 2 winding stations back to back for gap, centre-peripheral and contact winding. The winding quality of the b/ combiwind[®] represents one of the best solutions on the market, as it is directly developed starting from the systems of the most complex cast lines with flat die. The two stations are completed by the shafts loading systems through core store. The productivity with barrier film is of over 400 kg/h which become 500 kg/h for production with PE film (using anyway all 5 extruders). The planar thickness measurer, *B*-type, and the corona treatment grant that the manufactured film corresponds to the highest quality standards.

installation of extrusion line is the available space, as not only the place for the line itself has to be considered but also its competent logistics. An important Russian customer requested a special study for the installation at its factories of a 5-layer Barriercast[®] line whose run test is taking place in these days at Colines® Novara factory. The already compact layout of the line was further modified allowing to spare ca. 4 m lenght. The line produces a 5-layers coextruded barrier film by means of one main 120 mm extruder, 2 60 mm extruders and 2 further 50 mm extruders. The useful width is of 2100 mm, one of the best measure to cover the most part of the bands required by the market. The most commonly processed raw materials for this kind of line are: EVOH (for which a special extrusion screw is dedicated), PA, PS, PP, PE, TL'S and among the main application there will be the package with hot lamination for the meat market (PP/TL/EVOH/TL/PP). The correct

An important discriminator for the

Compact Layout for 5-layers

Barriercast[®] line in Russia

stratification of the raw materials is provided by the feedblock with variable geometry and the Cloeren Superflex die with EDS of 450 mm. The Dittering[®] system, developed by COLINES®, optimises the encapsulation by means of a side slipping of the thermal blocks inside the die, allowing a remarkable spare as concerns scraps thanks to the very limited necessary mechanical side slip. The line is equipped also with the Refesave® system for the side edge trimming recovery with polioliefinic base (PP or PE), which are directly reprocessable in line without regranulation. The system is particularly appreciated in the medical and food film packaging field as regranulation often causes a degradation of the optical qualities of the manufactured film. Elav provided for the electronic devices and for the software for the line's management, the production data and the diagnostic unit. The Russian customer extended the cooperation with Colines® with the delivery of a Handrollex[®] 1000 line and a Polyblown® 1800 line.

Colines® was the customer's choice as a recognised market leader as concerns the barrier lines.



New Barrierblown[®] line now in production in Italy



It is already in production and can be seen in Open House at the facilities of our sister company B-Pack[®] spa the new Barrierblown[®] line, with a useful width of 1800 mm for the manufacturing of 5-layers barrier film.

This plant represents the third generation of the Colines[®] blown film extrusion lines.

The line, with a mechanical speed of 100 m/min, grants a net production of 400 kg/h and a thickness range from 25 to 200 micron. The plant is equipped with 5 extruders, 2 of them with dia. 80 mm. 1 with dia. 65 mm and 2 with dia. 50 mm, lossin-weight / batch gravimetric dosing system with 13 components, "NON CONTACT" IBC device with 8 noncontact ultra-sonic sensor for the control of the frost line height, bubble diameter and stability and double lip air ring. The winding is realized by means of the patented winder B/ Combiwind[®] which allows 3 winding modes: by contact, centre-peripherical and "gap". The max. diameter of the reels is of 1000 mm.

Finally the line is equipped with a revolutionary air thickness meas-

uring system and combined with IR sensor for PA and EVOH profile measurement.





StePP 2008 conference

The conference organized by Borealis, producer of raw materials, has been a success. The event, which took place nearby the Como Lake, was planned in a detailed and professional way with outstanding involvements and presentations.

Eraldo Peccetti, CEO of Gruppo Colines Holding and B-Pack Holding, has presented the innovations and the extrusion technology of film for barrier packaging in food and medical fields. On the strength of the group's experience, the presentation aimed to demonstrate how synergies, developed thanks to the verticalization of Colines Holding and B-Pack Holding, have brought to numerous benefits in the developments of lines for the production of highly technological film.





ELAV: **In-Box Electrical System**

From the synergy between Elav and Colines® as concerns the automation systems for our extrusion lines stands out a solution of great practicalness and efficiency for the housing of the electrical and electronic parts of our plants. It is the "In-Box Electrical System", a container, available in the 20 up to 40 feet executions, completely air conditioned and compact in its

layout. Which are the advantaged of such a solution? First of all the container grants to reduce the installation times and therefore the costs deriving from them. Further, the dimensions make the load and unload operation much easier and allow a transport without problems and without risks of damages of delicate materials. Then the container makes easier ad more practical any maintenance as all the parts are housed there inside. Finally, the life of the electrical and electronic components becomes longer as they are protected inside the container from dust, dirty, damp and from dangerous overheating and over temperatures thanks to the air conditioned system which the container is equipped with.







PA/PE in extrusion directly in line

It is finally in production a line which is unique in the world, for the extrusion of PA and PE directly in line. The line works with only one extrusion die and without lamination and produces barrier film for food application with net output up to 900 kg/h. The so produced PA/PE film finds application in food packaging, more precisely vacuum-packaging and vacuum-bags as well as thermoformed packaging. This line with its special technology reduces or even cancels the curling effect as you can do it only with the traditional tandem lines, made up by 2 cast extrusion units and by an extrusion/lamination unit.

Vietnam moves forward with Colines[®] extrusion line

The Vietnamese market chooses Colines® for the production of coextruded CPP film. The recent delivery of two lines of the series POLYCAST® for a production of over 8,000 tons/year each is a demonstration of the positive feeling of the market towards the Italian manufacturer, when it comes to high technology and benchmark performances. Thanks to the premarketing activity made possible by COLINES[®]'s partner company, B-PACK DUE® (30,000 tons/year of CPP film), the Vietnamese market has been able to gradually test various cast PP film 5-layer structures before the arrival of the two lines. This typology of line permits a diversification and a sophistication of the packaging products still scarcely test-marketed in Vietnam. What makes this optimization possible is the first class technological equipment installed on both lines: 5-layer coextrusion unit with 100 % recovery of the material in no-scraps mode, CLOEREN die and feedblock, extruders with special screws for high homogenization, edge fasteners designed for high production speeds, and chill-roll with unmatched cooling power. With an average humidity level of 75% and peaks close to 80%, the immediate cooling of the film becomes extremely important. The airblade with exclusive design manufactured by COLINES® further facilitates this process, besides guaranteeing a lower deposit of waxes on the surface of the chill roll, with the consequent benefit of halving the ordinary maintenance interventions. Furthermore, our training service has prepared our Customers' technicians to work with the POLYCAST[®] lines with expertise and efficiency right from the first day. The know-how transferred cannot



CPP 1200 mm - Easycast®

New opportunities are going to be offered to the customers who wish to start the production of cast polypropylene film with a first range line, but requiring a not so big engagement, with high production capacity and with a low investment level. It is a 1200 mm wide line with a production speed up to 350 m/min (according to the type of the manufactured film). The plant is equipped as follows: a chill roll granting an instantaneous and more precise cooling of the film, a thickness measurer

which is available also in a version without radioactive source, integrated system for the trimmed edges recovery management which can arrive also to values close to 25%, corona treatment and winder of the Combiwind[®]-S series.



be quantified in economic terms, because the figures would be too high, but converters are perfectly aware of the cost of professional formation such as the operative training, the knowledge of resins in their grades and combinations (important in a sector where only PP is processed) the study of new products for specific markets. A new POLYCAST® extrusion line boasting a web width of 2800 mm will be soon ready for the East European market, further details are available in the micro-website www. polycast.it or in www.colines.it in the cast film section.



Air bubble film line in Asia



It is in advanced building state a line for Asiatic market for the production of air-bubble film. The line is an off line type equipped by conforming calender unit and laminating unit for the third layer more than an automatic rewinder

revolver model with 2 axes. The making of the bubble will be starting from 2 flat film. Generally it will be used coextruded films with 3 layers that, starting from the unwinders, it will pass through the conforming calender unit that it has the duty to make the bubble. Conversely, the third layer unit for the lamination acts by heating of the rolls that it will make adhere the bubble film with another support (ex. Aluminium, paper or expanded). The line speed is more than 50 m/min. The lines that Colines[®] has sell and installed all over the world for bubble film productions are more than 200. A complete line for the production of Bubble Guard[®] Board is now in production at the factory of a customer in France. With this plant, equipped with 3 extruders, one of 130 mm, another one of 100 mm and a third of 80 mm, our customer produces Bubble Guard[®] Board sheets, 2100 mm wide, realized with patented technology, in Polypropilene, 100% recyclable and composed by 3 layers: a central thermoformed layer and 2 external compact layers which are completely flat and with different possibilities of finishing (for example matt for printing or with possibility of in-line lamination on both surfaces with: PP foam, PP coated fabric, PP coated aluminium, PP coated carpet, PP printed film, PP metallized, PP coated paper, Barrier film, Non-woven fabric).

Its own advantages as concerns struc-

Production starts in France with a Bubble Guard[®] Board line

> ture, surface, weight and handling make the BubbleGuard® Board sheet the perfect instrument for applications such as exhibition panels, promotional panels, boxes for luxury products (for example wine, clocks, shoes...) in addition to applications for generic packaging and for handling (logistic markets). In particular this innovative sheet finds its own application in collapsable and returnalbe boxes, considering 6 journeys a month and 5 years of life. The product offers structural advantages if compared to the products of the competitors. In fact thanks to the alveolar structure it grants a very high resistance to compression in both direction. For the reason it can be used to replace cardboard, wooden and iron boxes with relevant results. The range of the sheets' thickness goes from 2 mm up to 17 mm.

Champagne caps in extrusion coating



Colines[®] recently took part with the company Alcat to the realization of an extrusion coating line meant for the production of champagne caps. It is a project of remarkable success for a line producing with a max. mechanical speed of 250 m/min and with a max. production speed of 220 m/min; the band is 1.350 mm wide and the thickness of the extruded film is included between 10 and 80 g/m². The extrud-

ed raw materials are PE, PP, PEMDL, EAA, EMA, EVA, Ionomers, PEHD, Iinear PE. The extrusion structures could be B/A/B or A/A/B. The machine is equipped with: a main and a secondary automatic shafted unwinders (with possibility of supplying them in their shaftless version) for aluminium with automatic reel change in both directions and max. reel diameter of 800 mm; a coupling gear for extrusion



Teleservice: a growing success for Colines[®]

Our teleservice system registers an increasing success among our customers. The telematic assistance represents in fact an immediate and prompt method for any problem you can have on you line from a mechanical, electric/electronic and process-related point-of-view. By monitoring what is happening on the plant for which you require assistance the customer wastes no time to identify the problem. Of course this means as a consequence also an advantage in terms of money saving as the web connection has practically no costs.



coating

with thickness checking system and corona treatment on both sides; of a centre-peripheral winder with max. diameter of the reel of 800 mm; of two extruders, one of 120 and the other of 80 with Cloeren extrusion die with automatic control of the lip. This line represents an additional proof of the Colines[®] experience as a supplier of equipments and complete lines for extrusion coating.

Furthermore, the identification of a problem thanks to the teleservice allows to offer real time solution to the customer, who can save the costs and the times required from the assistance of a technician on site and who can restart immediately with a normal production.