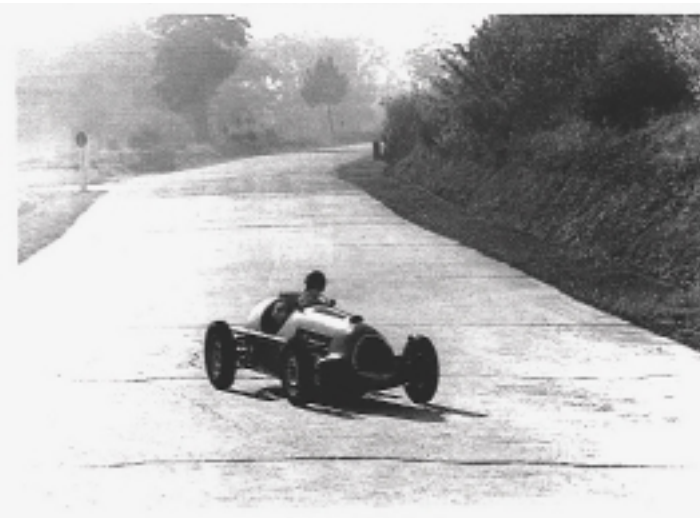


Back in 1946, Jicey was already innovating, with the Jicey sports car

Jean Caillas decided to create his own racing car to make known his invention of Aliplastic® seals (laminated, plastic-metal seals) for which Jicey had begun to work the patent in June 1946 in Viroflay. He therefore set to work, surrounded by a small team of technicians. The design concept of this car was a two-litre single-seater vehicle that combined speed with good road-holding qualities due to a chassis that was both lightweight and dimensionally stable. Its technical characteristics were as follows:



July 1947: first trials on a section of the western motorway

- The chassis in the shape of a rectangle formed by two AG5 light alloy open-work beams, was spot welded - a first at that time. This technique came straight out of aeronautical engineering, with which Jean Caillas was familiar, having worked in that sector, particularly during his national service. This process which was rare in the automotive sector, was used to produce the chassis, through the collaboration of SCIAKI Company. It required an appropriate welding machine which was specially brought in from the USA and was sent back once the welding points were completed. The result was a particularly lightweight chassis weighing 23 kg 700 with a good aesthetic appearance

- Four independent wheels:

The rear suspension was particularly original. It consisted of two superimposed triangles, one of which formed the lower arm of a flexible quadrangle, with elasticity provided by Sandow rings with double-stranded cords for which the elastic recovery was dampened by inclined telescopic hydraulic shock absorbers manufactured by Établissements Repousseau. Tension was adjustable by both the rings and the shock absorbers. The front suspension was provided by coil springs working in compression, with a hydraulic shock absorber incorporated into the suspension assembly.

- Transmission to the rear wheels was by a longitudinal shaft through a rear transaxle assembly with brake drums attached to the differential and with Glaenzer universal joints. The gearbox had four gears plus reverse. A Cotal electro-magnetic gearbox could be mounted on request.

- Hydraulic brake system with two master cylinders and adjustable front and rear distributor units.

- 402 Peugeot Darlmat four-cylinder engine, 1991 cm³, with two Zenith down-draft carburetors, speed 5,800 rpm with a compression rate of 10. 100 HP engine rating. Vertex magneto ignition. The fuel tank had a 55-litre capacity.

- The clutch was a new model with a rivet-free bonded lining

- The wheelbase was 2.23 m, the front wheel tread was 1.27 m and the rear wheel tread was 1.30 m. Ground clearance was only 9 cm. The wheels were fitted with Dunlop Racing tyres - 5.25 x 16 at the front and 5.50 x 16 at the rear.

They were Robergel wire wheels.

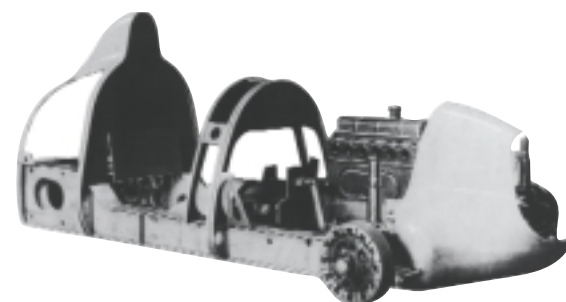
- The car body was drawn to scale 1 on one of the company's walls and was inspired by the Cisitalia D46 single-seater. It was made of Duralinox, and Jean Caillas himself was surprised by its overall volume which was much greater than that of the small Italian 1100 cm³ vehicle. The triangular radiator grille with horizontal strips shaped by hand completed a long, forward-sweeping bonnet that gave the entire car a modern, highly attractive style particularly as the right side of the bonnet had an opening fitted with a number of metal strips, which allowed four exhaust pipes to act directly with no further retention.

The empty vehicle only weighed 469 kilos.

The prototype, which was entirely built at Jean Callas's Jicey works in Viroflay, was rolled out in the summer of 1947 and underwent trials on the section of the western motorway not yet opened to traffic.

The car was painted French blue and was immediately displayed at the October Car Show at the Grand Palais in Paris. This handsome new racing car with its imaginative innovations was favourably received by all the press and before long, attracted the interest of a racing driver, who bought the car. And thus it began a long sporting career...

Still to come: Pilots, engines and adventure...
Pierre Fouquet-Hatevilain



December 1946: first presentation of the engine in frame No. 1

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SPECIAL ISSUE
THE VIEWTEK PROCESS

Jicey innovates and launches the Viewtek® process

By constantly innovating, and to further facilitate the use of the company's bi-composite peelable shims, Jicey has developed a marking concept that immediately shows which side is to be peeled according to the thickness (0.025 - 0.050 - 0.100 mm). This patented concept consists in the marking of the elementary thickness directly on the centre of the shim, which is visible by transparency over the entire top thickness. The Viewtek® process also uses a colour code for each of the proposed thicknesses. This makes it extremely user-friendly and enables two different thicknesses to be positioned without confusing them. It thus takes much less time to adjust the shim, through a quick rough approximation of the required thickness.

Alkomposit® naturally lends itself to this process and has thus become Alkomposit Viewtek®.

Alkomposit Viewtek® is a high-precision, cleavable, adjustable shim, and is bi-composite through the use of polyethylene terephthalate (polyester) films. The original binder, which is different from our metal Althermill® shims (epoxy resin), bonds these films together to form this compact product and give it outstanding peelability. Together, these built-in qualities meet all kinds of new applications in which it is important to cater for the concepts of insulation, vibration damping and light weight in a wide range of temperatures.



Consequently, in addition to the many advantages of using the conventional Alkomposit® - neutrality under chemical aggression, elimination of oxidation, flexibility, adjustment to curved surfaces, easy peeling, safety in use and the recovery of removed films for possible re-use - the exclusive Viewtek® process immediately shows the side to be peeled with

no measuring device and no wasted time. The operator can thus begin to adjust the shim by peeling off the thickest films and can obtain the final dimension by removing one or two thinner films as required. Their outstanding peelability makes it possible to separate them by hand, without the need for special tools, and to use the removed films as unit shims.

Since the beginning of September, we have decided to give our customers a preview of this technique before the official commercial launch. As a result, all our current orders for the conventional Alkomposit® have been converted to Alkomposit Viewtek®. This product has spontaneously received an extremely enthusiastic reception and has given rise to new, highly interesting applications.

The first company to receive be served is ASS AG, for which we have reserved the middle pages of this Issue No. 9.

ASS AG: low-noise efficiency

In mechanical and industrial engineering, much of the optimization potential is invested in appropriate drive systems such as the gears. ASS AG, a drive system manufacturer, has developed and manufactured a modular system for new worm gears and spur gears using modern processes that give better results in terms of efficiency and long life.

Electrical and mechanical drive systems are often key to the technical and economic optimization of the complete product. Users of drive systems make great demands on the components. Space-saving construction, high machining speeds, good adjustability, low-noise operation with no power loss, a long service life and minimum maintenance at competitive prices are the most common criteria requirements. Alongside these demands, qualified technical assistance for studies, calculations and testing together with reliable delivery service are gaining importance.

Structural shapes and characteristics of the drive systems

In view of the different requirements to be met by drive systems, many structural shapes have been developed over time, with their specific advantages and disadvantages. The main types are spur, bevel and helical gears with involute tooth profiles that can be combined as multi-stage drive systems. Because of their diffusion, all the gears have thus reached a high technical standard for which the requirements apply as much to the precision of the calculations, choice of materials and lubricants as to the manufacturing process.



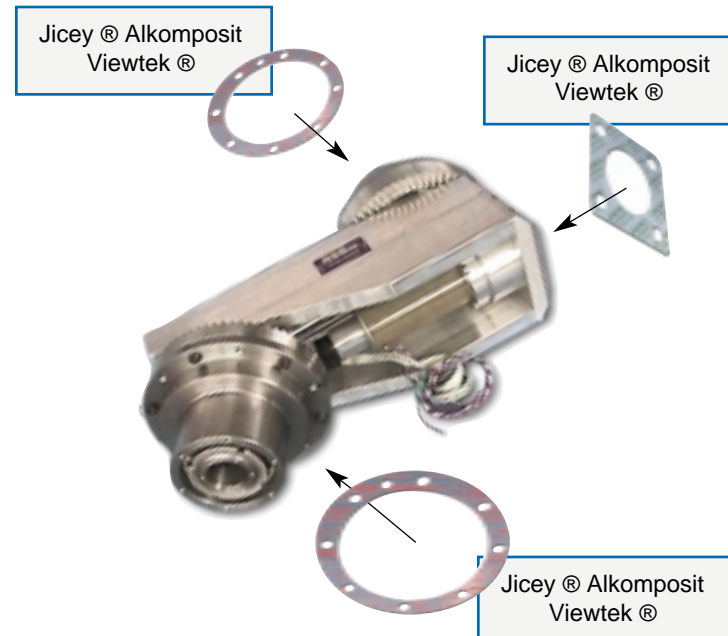
The ASS AG engineers have already considered practically all the problems liable to affect drive systems and have carried out tests accordingly. From space technology to drive systems of hydro-electric power stations via micro-drives for bonding systems, these systems must perform the same function, through dynamic movement taking into account all the corresponding restrictions and conditions. ASS AG has had the responsibility of producing drive systems for more than twenty years.

From the start command through to the mechanical implementation of the movement, we propose the solution of a system with the three main criteria: quality, lead times and above all, competitive prices. We also attach great importance to cooperation with partners such as Jicey, since even in our highly technology-based world, good cooperation still relies on personal relations.

Article by Mr Peter Werro
(ETS Engineer, Director of ASS AG Design Engineering)



A typical field of application: the medical field, The reducers are mounted in this Storz ultrasonic operating table



Peter Werro, Design Engineering Director, answers our questions

What are the assembly and precision shimming requirements and constraints of ASS AG?

[Peter Werro] The production of reducers requires highly accurate positioning of the components, particularly the bearings and gears. Often, the insertion of a thin standard shim will provide shimming for all these components. But in the case of sophisticated drive systems, very accurate adjustment is necessary and the adjustment ranges can vary from a few tens to a few hundredths of a millimetre. It is then essential to use a high-precision shim of variable thickness and with very accurate parallelism. In this case, a solution using a peelable shim is the most cost-effective and the quickest to install.

Why did you opt for Alkomposit ® bi-composite, peelable, adjustable shims and what are the advantages of this product?

In fact, we had considered using steel peelable shims but Alkomposit ® shims met our mechanical constraints and were much easier to peel. And as I said earlier, our adjustments vary greatly and can be 0.1, 0.5 and even 0.05 mm. With a single Alkomposit ® shim, we can obtain all the required adjustments with no wastage of material. Unlike metal shims, even the removed elements can be used since they retain their original shape and flatness. A single product thus provides both very thin unit shims and peelable shims. The fitters are satisfied with the ease of use and the inventory manager also benefits because there are fewer product references to handle.

Did you opt for a bi-composite shim right from the design stage?

Yes, of course, we are provided with a shim that offers the same accuracy at a much cheaper price.

And what exactly do you think of the new Alkomposit Viewtek ® marking process that makes it possible to immediately identify the film thickness?

The first Viewtek ® shims were produced for your company.

The fitters are no longer unsure of which side to peel, they merely read the thickness on one side or the other. Moreover, after mounting a few shims, they do not even bother to read it, they just refer to the marking colours as each thickness has its corresponding colour. This avoids any risk of error and increases the ease of use still further.

What reasons led you to choose Jicey as your partner?

Our attention was attracted to the Jicey stand at the Hanover Fair, where we discovered the principle of the peelable shim. Responsiveness, product quality and prices did the rest. Our aim is to react individually to our customers' specific requirements. Jicey has helped us and is continuing to help us in our efforts.

ASS AG: history of success

- 1979: Creation of ASS AG Company
- 1982: Construction of offices and works in Düdingen with Economic Promotion Aid by the Canton of Fribourg
- Adoption of the leading edge technology of suppliers such as Harmonic Drive, Expert, Crown Gear, Kauermann and Siebenhaar as the basis of ASS AG quality
- 1996: Certification and introduction of the ISO 9001 quality assurance system
- 1998: Introduction of the ASS AG Evolvere® product line for a customized drive system ... exceeding the standard!

- 1999: ETH/KTI project. Active vibration reduction for vibration-free, low-noise precision engineering
- Staff increase for the design engineering, sales and production departments enabling ASS AG to respond individually to specific customer requirements in the following sectors: textile machines, robotics, elevators, medical engineering, printing machines, automotive industry, machine tools, automation and semi-conductors



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Summary of advantages of Alkomposit Viewtek ®

- Low density (50% of that of aluminium)
- Can be used as a damper or vibration filter
- Possible re-use of peeled films
- Fine individual strips: 0.025 to 0.1mm
- Highly resistant to temperatures between -70°C and +220°C
- Bi-functional (shimming + sealing) under certain conditions (consult us)
- Immediate identification of the elementary thicknesses by an exclusive patented process.
- Prevents contact corrosion problems
- Colour code: 0,025 mm, 0,05 mm & 0,10 mm
- Safe use (practically no risk of being cut)
- Can be separated without the need for tools
- Easy bending and adjustment to curved surfaces
- Excellent resistance to chemicals