

## Curetime Coming

**T**he name Curetime first appeared last year as a special section on our website. Since then we have been researching and developing the concept of Curetime as a high-value resource for everyone in the industry.

After a lot of work collaborating with many people, we are now very excited about the launch of the completely new Curetime on-line resource in the autumn this year!

At [curetime.co.uk](http://curetime.co.uk) it will feature a special interactive Academy which will contain a series of unique learning modules which cover a range of subjects from basic foundational moulding principles, through to more advanced modules on special effects and prosthetics.



Sample course module



Trying out a Curetime pilot module at Worcester College

The content of the modules has been very carefully trialled and tested and the reaction from all those involved in the research and development has been extremely positive.

The format of the modules has been designed in such a way as to make them extremely practical and very easy to follow. But at the same time, they are very detailed so that every aspect of each moulding and casting process is completely covered.

An important point to stress is that they have been developed not just

for those who are beginning to learn about moulding. They are valuable learning modules for everyone, containing foundational principles of how to get it right.

At the launch there will be five modules available in the Academy – making a basic “pop-out” block mould in silicone; making a silicone mould that requires cuts to release a hard master object; a gravity pour skin mould; creating a facial prosthetic for special effects and how to begin creating an extremely life-like look to a life-casting using silicone paints.

**Curetime is an industry first - there is nothing else like it!**

As we have stressed, it is for everyone, from the beginner through to the skilled practitioner and it will include an on-line shop for easy access to a wide range of moulding and casting products from the featured modules.

**If you would like to be invited to the on-line launch of Curetime please email us at [info@bentleychemicals.co.uk](mailto:info@bentleychemicals.co.uk) with “Curetime” in the subject line, and we will add you to the list!**

# Amazon Art

**B**entley Creative Chemicals have helped to supply an unusual research trip to the Amazon.

Three sculpture graduates, assisted with scholarship funding, have been to South America to discover how the indigenous tribes of the Amazon fashion and use a wide variety of different objects, for both practical and social purposes.

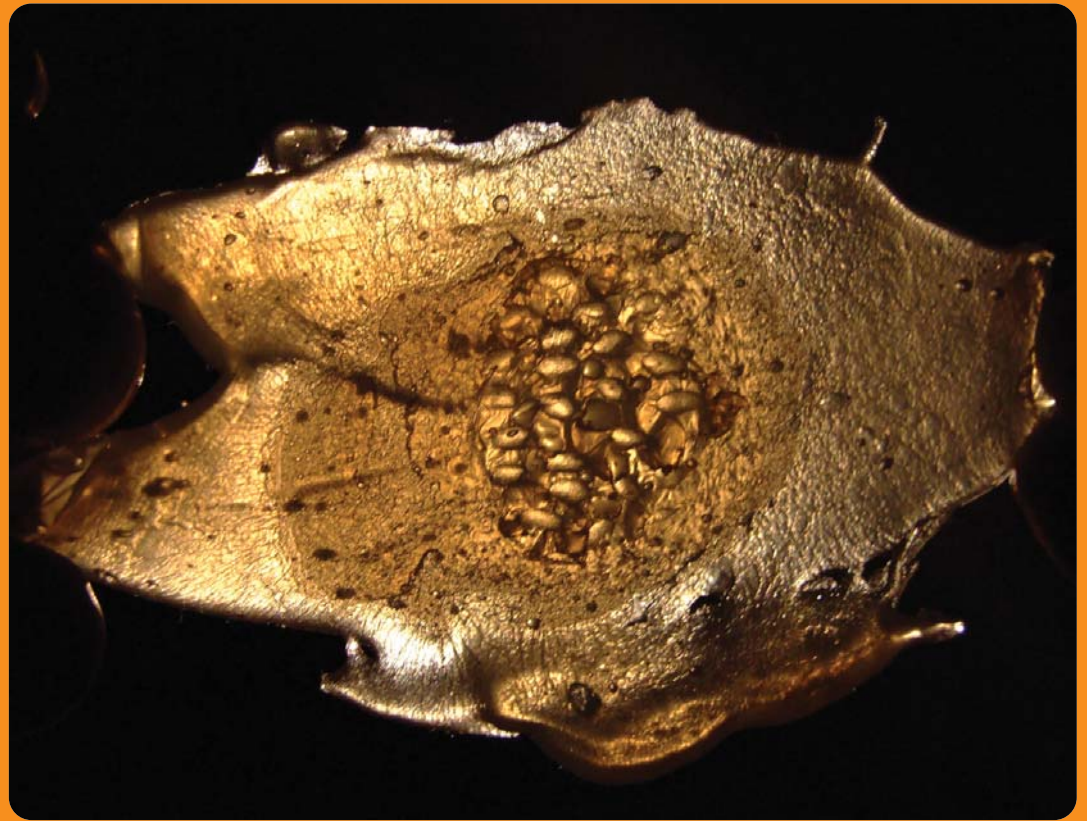
The aim of the trip was to capture and record as much information as possible so that they could create "sculptural responses" of what they had seen on their return to the UK. The team also planned to put on an exhibition of their work and eventually write



*Using seeds to stain ceramics*

a book.

Team member Chloe Reynolds commented, "We wanted to take mouldings of as many different objects as we could so that we could cast and re-create them on our return. However, taking moulded impressions when you are living out of a back-pack in



*Ecoflex moulding of a Guava fruit*

the Amazon is not straightforward!"

The team tracked down Bentley via the internet and explained what they were trying to achieve. Bentley's technical sales team advised that they might be best to try using a portable hand-held gun and EcoFlex to get the "instant mouldings" that they were looking for deep in the rainforest. Mike Dargan from Bentley made a last minute, late night delivery just before the team were leaving.

Safely back in the UK after their 3 month adventure, the team have brought with them a variety of different unusual mouldings, although they have learnt a lot about trying to carry out detailed moulding work under hot

and difficult conditions! They plan to discuss with Bentley what they have learnt from their experiences, before planning a return trip to South America later this year. "Bentley were fantastic in the help that

they gave us," added Chloe, "after we have held our exhibition, we will be talking to them again."



*Shaking the beans in Quechua tribe*

# Better Blades

# Amusing Alternative



Foam filled blades in action

**L**ance Mitchell manufactures high performance paddles for canoeing. His specialist "blades" are used in white water canoeing and touring. More recently he has decided to add slalom canoeing to his portfolio of products, with an eye firmly set on supplying in time for the 2012 Olympics.

He learnt his trade in the States working with a company in New Hampshire, which was run by a relative. For the first 18 months of his



apprenticeship, he made high quality wooden paddles before progressing into moulding with glass fibre reinforced resins.

On his return to the UK at the end of 2001, and helped by the Prince's Trust, he set-up Mitchell Blades and began manufacturing out of moulds that he had acquired in the States to "get him going."

To begin with, the company supplied the white water sector of the sport using the

existing moulds but it wasn't long before Lance began developing his own high performance designs using woven rovings and carbons.

In 2007, it was decided to introduce a completely new design which featured a lightweight foam core. Traditionally the core of all the blades was hollow, but in particularly high temperatures this could lead to problems.

To accommodate the introduction of foam, a new mould had to be developed and Bentley Chemicals became involved

sourcing the right materials for the foam in-fill. "The service from Bentley has been really good," commented Lance, "their technical knowledge and range of products have been a great help."

Today there is only one other company in the UK manufacturing competitive blades for canoeing, and Lance is hoping that the 2012 Olympics will be bringing a further boost to his already successful business.

**P**an Amusements are the only company in the UK supplying specialised figurines for electronic shooting galleries. Usually found in fairgrounds, amusement parks and large American department stores, the galleries tend to feature a weird and wonderful selection of larger than life characters, with heads and

reinforced resins and for Pan Amusements, it provided an attractive alternative. "Straightaway we found it was much easier to work with," commented Paul Whittaker from Pan, "it also produced a better finish and we are very happy with the product."

Plasti-Paste will hold to a



Typical shooting gallery target from Pan

limbs that are traditionally made out of glass fibre reinforced resins. The figures are positioned in a variety of themed settings and act as sitting targets for the trigger happy clientele.

Founded nearly 40 years ago, the company's early growth was established supplying figures for Disney and today 70% of the company's business is still in the States, although it supplies to 60 countries in total.

Smooth-On's two component fibre-filled resin Plasti-Paste, supplied by Bentley, has introduced a powerful option into the marketplace for specialist fabricators who have traditionally used glass

vertical surface without sagging and cures to a strong, durable and lightweight plastic. It has a working time of approximately 8-10 minutes, is easy to mould and shape and cures in 90 minutes. It can be used for a variety of applications including artistic fabrications and special effects, as well as a support case or "mother mould" for use with softer moulds made from rubber.

It can also be used as a powerful adhesive and as a repair material for a variety of industrial applications. It can be pigmented and once cured, it can be sanded, machined and then painted with acrylic enamel paints.

# Mine Memento

**T**he Black Country "capital" of Dudley has had more than its 15 minutes of fame for a variety of reasons: everything from Lenny Henry to faggots and peas - but it is the town's reputation for being a source of unique fossils that has seen another unusual application for Bentley's specialised moulding materials.

Underneath Dudley there is a complex network of limestone caverns. Some of these have been on the local tourist map for many years and there are even tours by canal boat run by Dudley Canal Trust Trips from their base adjacent to the Black Country Museum. The excavations have already made famous the "Dudley Bug" a unique trilobite fossil which was discovered there and proudly features in the Borough's Coat of Arms.

Unfortunately just over twelve months ago, a bid to secure £50 million of lottery funding to develop a major tourism attraction known as the Strata Project



Mould and casting of the "Dudley Bug"

failed. The Strata project included the stabilisation, and opening to the public, of an underground cavern known as the Step Shaft Gallery. This unique underground feature is in a serious state of collapse and in order to preserve it for the future the mine is now scheduled to be temporarily filled in with sand in order to preserve and stabilise the area, but this will not happen until a project to capture the unique geological features of the mine has been

completed.

GeoEd are a company specialising in making high quality fossil replicas chiefly for use in education and museums. They have been commissioned to work with the Dudley Metropolitan Borough Council to capture the treasures of the Step Shaft Gallery.

GeoEd has had considerable experience of working on unusual commissions - everything from moulding a dinosaur track, through

to capturing a 120 square metre rockface for the British Geological Survey.

For this highly specialist challenge, GeoEd will be using RTV 3540 supplied by Bentley to mould the underground sections of the mine.

The project is expected to take a further 3 months to complete and in the next issue of Broadcast we will detail what they have been able to record from the depths under Dudley!

## Dental Difference

**I**f you've been through the experience of getting fitted out for a crown or a denture, you will be familiar with a process that begins with the odd sensation of biting into a gelatinous material to leave an accurate impression of your teeth. Two weeks later, and you're trying to exchange pleasantries with your dentist while the new tailor made crown is

manoeuvred and glued into place.

Ceroplast is a company that specialises in manufacturing crowns and dentures and their technicians have recently started using a blend of silicone specially formulated and developed for them by Bentley Creative Chemicals.

Karl Banks heads up the team of Chrome



Technicians at Ceroplast - "To create our master model based on the impression taken by the dentist used to take us about 3 hours working with the traditional agar based material. With this new silicone we have more

than halved the process time. Bentley have given us a fantastic service in specially developing the right blend of silicone and the duplication is superb."

# FUNCTIONAL FORMS

The unique furniture of Rolf Sachs continues to push out the boundaries, blurring the distinction between functional furniture and art form. The humble cafe chair has been a continuing theme over the years and remains at the centre of his latest collection.



A 'birth cowl'

In 2007, two striking pieces created out of polyurethane and silicone made their first appearance at an exhibition in New York. "Spineless" and "Can't Sit Still" were very shaky cafe chairs and Bentley Creative Chemicals worked closely with the studio helping them to achieve the unusual performance properties through advice on moulding and production techniques, and selection of the right casting resins.

'Take two' is the title of his latest collection featuring a number of different works including a complete dining room set with table and chairs. At its centre is the idea that every object at first glance seems one thing, only on closer inspection it is often revealed to be



'Take two'

quite another.

'Spitting Image Chair' is a chair of the simplest design. The studio description explains that "it has been reborn as an amber monolith of cast resin - the translucence of the material adding further layers of richness and depth to a

form that is both recognisable and wholly different."

In other works in the collection, the resin cast of the chair has been left with the flashing totally untrimmed, representing a "birth cowl" of the new born chair.

## Farmer's Feelings

How do farmers know when their sheep have just the right meat/fat ratio for the abattoir? Or, how do they decide that their rams are ready for "tupping" - as it's called in the trade?

OK, it's probably not something that most of us have spent restless hours pondering over in the middle of the night, but to the farmer these are serious issues that directly impact their business.

EBLEX is the new Beef and Lamb Sector Company for England and as a division of the Agriculture and Horticulture Development Board, it is responsible for technology transfer, marketing and promotional programmes to farmers, consumers and businesses in the beef and lamb supply chain.

Part of EBLEX's work is to make available training that will help farmers to build their profitability and during 2008 it was responsible for



introducing two new training initiatives directly aimed at tackling the issues outlined above.

One of the quickest, simplest and most reliable tools that a farmer has at their disposal is their sense of touch - but it needs to be an educated and trained

one in order for them to make the right decisions. When it comes to testing for tupping, the farmer goes straight to the heart of

the matter and feels the ram's testicles to see if he is up to the job. Similarly, when it comes to gauging the meat/fat ratio on a sheep, the sense of touch can be the most accurate and immediate method of making the right decision.

Traditionally a variety of

props and rubber models have been used as part of the training programmes but Eblex were keen to develop training models that could provide a much more accurate and life-like touch, which is where Bentley Chemicals entered the story.

"Trying to blend a silicone that would recreate a life-like feel for a ram's testicle has been one of the more interesting technical challenges that we have met," commented Rob Price from Bentley, "but working with the EBLEX team, we got there in the end!"

The "tupping tester" was launched at last year's Royal Show, with the loin, ribs and dock silicone model launched at the Royal Smithfield Fair in December. Both initiatives have been very well received.



# Handy Hints

## NEW PRODUCTS

### Painting Cured Urethane with Smooth-On's Brush-On 40

Creating stunning painted finishes on platinum silicone rubbers like Dragon Skin has been possible using Psycho Paint for some time. It bonds extremely well to the silicone and will bend and flex with it without delaminating.

Smooth-On have received many requests to develop a urethane paint that would bond and flex when used with cured urethane castings made from ReoFlex or VytaFlex. For a long time they were unable to find the right formulation or the right product, at the right price.

But now Brush-On 40 has been tried and tested and works very well, bonding as if it were part of the original colouring. Using SO-Strong pigments it can be used to achieve a wide range of colour effects and can also be thinned with mineral spirits and spray applied to build up colour layers.

**New Plasti-Paste** - Will eventually replace original product – superb for making support shells and will hold onto a vertical surface during application. Can be primed and painted with acrylic enamel paints. Harder than original and less material can be used. Also has higher heat distortion temperature.

**Moldmax 60** - Tin catalysed silicone with high heat resistance. Can withstand up to 560°F / 294°C. Low mixed viscosity and low shrinkage. Can be used for foundry patterns and low-temperature melt metal alloys.

**Silicone 94-222** - A Shore 30A tin catalysed silicone that gives improved resistance to casting urethane resins. Has low long term shrinkage.

**Mold Max 10T** - Shore 10A translucent tin catalysed silicone. Suitable for making moulds, animatronic skins, props and special effects. Cheaper than Dragon Skin.

## DRIVING DEVELOPMENT

**W**orld Golf Systems are responsible for "Top Golf" an innovative golf range system which was first featured at a new site opened at Watford in 2000. The unique package incorporates golf balls with an embedded micro chip and a special mesh that is buried underneath the range which accurately reads where each ball has landed. The information is then displayed via an electronic screen system so that each player can see precisely where their shot has gone.

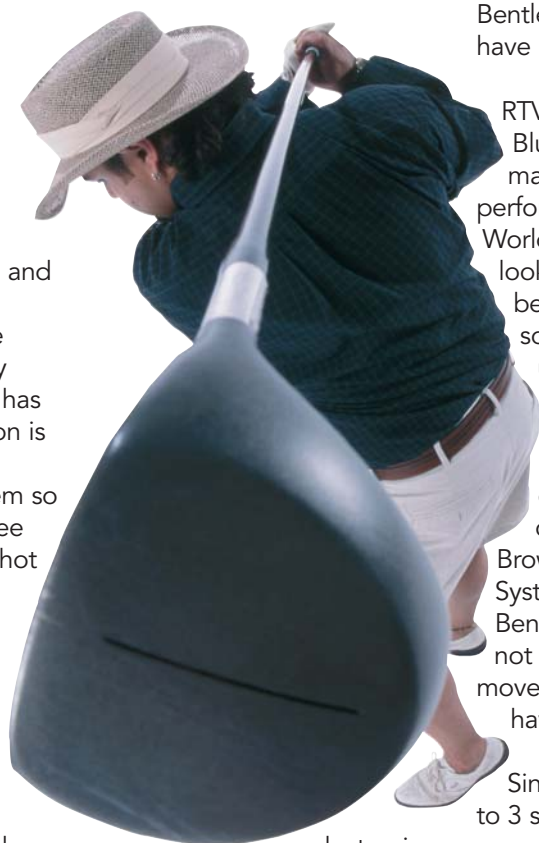
Each underground mesh features 500 reader units which contain the electronic equipment that registers the golf balls micro chips. The units have to be completely sealed and strong enough to be

buried under ground for several years. The sensitive

robust, durable and long lasting, which is where Bentley Creative Chemicals have been able to help.

RTV 4420 silicone from Bluestar precisely matched all the performance criteria that World Golf Systems were looking for. "We are now beginning to replace some of the original units and we are also on the brink of launching a new version of the game called Top Shot" commented Dave Brown from World Golf Systems, "without Bentley's input we would not have been able to move ahead in the way we have."

Since 2000, in addition to 3 sites in the UK, there are now ranges in the States and in Thailand.



electronic equipment is encapsulated in a resin that has to be

## SFX News

Recent films that Bentley have supplied silicones, urethanes, foams and a variety of special effects materials to include Daggars of Time, Nine The Musical, Kick Ass, Sherlock Holmes and Silent Witness.



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