Working Together

Part of building a successful and long-term relationship with a customer means setting realistic expectations and ensuring everyone knows where they stand. Consequently in this issue of Celsius we've included a table (below) outlining the general heat treatment processing turnaround times so that you can get a good understanding of what we can and can't do.

General heat treatment processing turnaround guidelines

Process	Turnaround Times	Material
		D2
	2 Days	H13
		400 Series Stainless Steel
Air Hardening		A2
	3-4 Days	Calmax
		2767
		A6
	Weekends Only	
	* Subject to load size/quantity	High Speed Steel
		4130
		4140
		4340
		1050
Oil Hardening	**2-3 days**	1070
		O1 – Gauge Plate
		S1
		S5
		EN30B
		EN45

Case Hardening (Carbonitriding-Carburising)	**3 Days**	**Most Materials**
Induction Hardening	**2 Days**	
Long Run Nitriding	**2 Days**	
Short Run Nitriding	**1 Day**	
Aluminium Alloys	**3-4 days**	
Stress Relieving	**1 Day**	
Solution Annealing (Stainless Steels)	**2 Days**	
Tool Steel Annealing	**Weekends Only**	

The small print:

- *All turnaround times quoted apply to normal jobbing work only, and the times are determined as 24-hour blocks, from 2pm to 2pm, Mondays to Fridays. These guidelines only apply for work received into our receiving area, and does not include time in transit to and from Heat Treatments.*
- *If any preparation work is required before processing can be undertaken, (e.g. pre-cleaning, annealing, plating-off, centreing pins, etc), the turnaround time may be delayed accordingly.*
- *For work to be processed efficiently, customers' should endeavour to have their work at Heat Treatments premises by 2pm at the latest, or the work may not start to be processed until the following day.*
- *Customers' work should be ready for pick-up after 2pm on the day of completion of processing, or for Auckland deliveries the work can be dispatched on our van the following day.*
- *Turnaround times for larger quantities and/or batch work, and large work pieces, can be provided by arrangement.*
- *On occasions where quicker turnaround times are required please contact us directly to see if this is possible, however, these are handled as exceptions on a case by case basis and a surcharge may apply.*
- *These "turnaround" times are a guide to assist our customers with their planning. They are supplied with our best intentions and a high confidence level of achievement, however, on the rare occasion that we may not meet these guidelines, whatever the circumstances, Heat Treatments Limited will not be held liable for any loss or damages suffered.*

A cause for celebration

Luke Muraahi

It's always great to see young people succeed and so we'd like to take this opportunity to congratulate Luke Muraahi on completing his apprenticeship and receiving his National Certificate in Engineering, Machining and Tool making.

Luke started out with another engineering firm and then made the shift to Heat Treatments as an apprentice. We got him started on manual mills and lathes and he gradually worked his way up to the CNC machines. Combined with a talent for all facets of grinding, Luke is fast becoming a solid contributor in the machine shop.

Congratulations Luke!

Heat Treatments

QUALITY • SERVICE • EXPERTISE

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The Heat Treatments Service Team:

Heat Treatments:	Len Allen	Customer Service
	Reece McGregor	Production
	Dean Gounden	Quotations
Technical / Metallurgical:	Adam Walmsley & Ivan Mitchell	
Machine Shop:	Dennis Scotting	Estimates & Quotations
	Brian Thompson	Production
	John Baird	Operations
General:	Steve Askew	Quality Co-ordinator
	Kathy Williams	Receptionist
	Elaine Folau	Accounts Receivable

Celsius

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Planning - A Necessary Evil?

Achieving a consistent level of service delivery means being organised – and that means having a plan. However plans can often go out the window if people don't have realistic expectations of what is possible and what is not. So advising customers as to how long things take at Heat Treatments and working with them to develop a mutually beneficial plan can result in a real win-win situation.

In this issue a key focus is on turnaround lead times for most general jobbing work. Our aim is to build your understanding of what is possible and to provide a platform from which we can work together. Ultimately this will enable you to plan your own work more effectively and ensure you meet your own customers expectations. It also means everyone will suffer less disruption, expense and stress by being more organised.

Also in this issue we profile Hydraulink Fluid Connectors, who we have been working with on a daily basis for over 15 years. The team in the lab focus on plastics tooling and the Machine Shop announce the arrival of their latest 'Big Boys Toy' – a CNC grinder. Last, but by no means least, we congratulate Luke Muraahi who has completed his apprenticeship and qualified as a tradesmen in our Machine Shop.

Fergus Thomson

General Manager

Heat Treatments
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Celsius
CUSTOMER PROFILE

Hydraulink Fluid Connectors

In this issue of Celsius we profile Hydraulink Fluid Connectors Ltd, a New Zealand owned and operated company whose name is synonymous with high quality hydraulic hoses and fittings.

What are Hydraulink's key products / services?

For over 50 years, Hydraulink has been manufacturing and distributing hydraulic hoses, fittings, couplers, tube assemblies, adaptors and accessories to the New Zealand, Australian and Asia-Pacific market.

The company operates a network of over 200 shops and distributors and a 'Fast Fix' Mobile Van Service which provides on the spot repairs and replacements of worn or damaged hose assemblies.

Hose kits are also manufactured to customer requirements and, to reduce downtime, excessive maintenance and replacement costs, the company offer a hydraulic and industrial hose management programme.

What are the drivers behind Hydraulink' success in the market?

Managing director, Robin Simpson, says the business is committed to being the best in terms of product quality, service and people. Hence they focus on building long term relationships with their customer base through exceptional service. Another success driver is the brand itself. By working hard to ensure the market has a solid understanding of who the company is and what it can provide, Hydraulink have created a market perception that is synonymous with quality. This perception has been a significant factor in the growth of the business over the last decade.

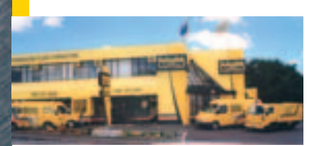
What does Heat Treatments do for Hydraulink?

According to manufacturing manager, Heather Fawthrop, Heat Treatments is one of the many critical links in the company's supply chain.

"Heat Treatments have been doing all our copper welding and annealing for over 15 years. On a daily basis we send them about 200 – 300 kilos of material and it's important that it's processed and returned the next day or we can begin to have issues with our own customers."

"At the end of last year when one of the Heat Treatment vacuum furnaces broke down we were concerned that we would run into delays. However an engineer was flown in from Australia and the furnace was back up and running almost immediately."

"There was a time when we attempted to do our own processing, however we found that the Heat Treatments furnaces were superior and, as we're committed to delivering a quality product to our clients, we made the call to stay with Heat Treatments."



Hydraulink FLUID CONNECTORS
Hydraulic Hose & Fittings Service
Best under pressure

Did you know:

Our old telephone and fax numbers have now been disconnected and are no longer available.

All telephone enquires to Heat Treatments should now be made using our new numbers;

Telephone **(09) 621-0020** and
Fax **(09) 621-0019.**

In addition, if you know the extension number of the person you want to speak to, you are now able to contact them direct...

Len Allen	Customer Service	Ext. 220
Dean Gounden	Heat Treatment Quotations	Ext. 230
Adam Walmsley	Heat Treatment Technical Enquires	Ext. 252
Ivan Mitchell	Heat Treatment Metallurgical Enquires	Ext. 250
Dennis Scotting	Machine Shop Estimates & Quotes	Ext. 241
Brian Thompson	Machine Shop Production	Ext. 242
John Baird	Machine Shop Operations	Ext. 240
Steve Askew	Quality Co-odinator	Ext. 217
Elaine Folau	Accounts Receivable	Ext. 213

And finally, a lengthy 'Lead Time'...?

Heron of Greece invented steam power in 50 BC. However the leaders of the day thought that it would cause unemployment and unrest, so the invention ran out of steam...

It wasn't until 1815 that George Stephenson built the world's first workable steam locomotive.

A Recipe for Success: Plastics Tooling

Tools used in the processing of plastics are mainly exposed to pressure and wear. In addition, depending on the types of plastics involved, corrosion can also be an issue.

Below is a table detailing the most common approach to materials and processes used for plastics tools. This has been designed as a basic guide for those with limited knowledge of the plastics tooling industry. In reality there are many other combinations of materials and heat treatment that will perform equally well and we find many toolmakers have their own 'favourites'.

Plastics Tooling

Application	Main Properties Required	Suggested Material & Heat Treatment
Granulator blades	Wear resistance, edge retention, toughness	A2 H&T to 58/60HRc
Extruder screws	Wear resistance	P20 Nitrided
Smear heads (extruder)	Wear resistance, toughness	H13 H&T to 50HRc and nitrided
Injection moulds (medium duty)	Compressive strength, wear resistance.	P20, sometimes nitrided for extra life.
Injection moulds (heavy duty)	Higher compressive strength	H13 through hardened or 2767 through hardened. Approx 54-56Hrc
Sliding blocks, wedge blocks	Wear resistance, dimensional stability	P20 nitrided.
Sprue Bushes	Wear resistance	EN36a case hardened.
Ejector pins	Wear resistance, toughness	H13 H&T to 50HRc and nitrided

Please note that this information is provided as general guide only and should not be treated or substituted for detailed technical advice in relation to individual applications. Heat Treatments Limited disclaim any liability for loss or damage suffered from the use of such data.

* H&T = harden and temper

More than just a 'Big Boys Toy'!

The biggest problem with going to the 'Big Boys Toy' show is that you can look but you can't touch. Thankfully that wasn't the case when the machine shop installed their latest new 'toy' – their new CNC Universal Grinder. In fact they've been 'playing' with it every day since!

The new machine – a Shigiya GPL 30.1000 2 axis CNC Conversational Grinder - has the capacity to grind work up to 300mm diameter with lengths up to 1000 mm and is equipped with an internal grinding attachment and a longitudinal positioner to accurately locate faces. The control is capable of two axis simultaneous movement and full contouring.

Repeatability of the wheel in-feed is less than 0.0003mm and the minimum input increment for both the wheel head and table is 0.0001mm.

With all this and more, another key benefit of the new Grinder is increased capacity – just check out some of the possibilities....