



COGRI GROUP



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COGRI NEWS

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Eliminate Rocking Slabs with the CoGri Joint Stabiliser

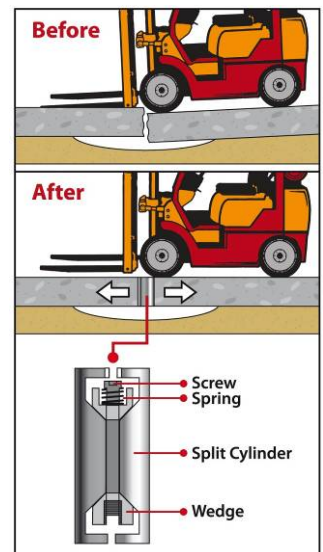
The CoGri Group has acquired exclusive European distribution rights for the patented SD7 Joint Saver which will be marketed as the CoGri Joint Stabiliser and managed by CG Flooring Systems Ltd.

The CoGri Joint Stabiliser (CJS) is a fast, cost-effective method for eliminating rocking slabs. CJS is a split aluminium cylinder (3" diameter, 7" long) containing a screw and wedge torque mechanism. When inserted between two slabs and expanded the pressure provides the interlock needed to restore load transfer and virtually eliminates harmful slab movement. The spring-like mechanism allows it to expand and contract with the slab as it undergoes normal slab movement due to temperature changes. This gives users year after year of superior performance. CJS comes in different sizes, 200mm, 175mm and 150mm depending on the slab depths.

Main benefits of CJS include restoring positive load transfer at joints; CJS is a quick, clean and easy cost effective solution with minimal disruption to the clients operation; once installed the floor can be used immediately. Compared to methods to correct rocking slabs, CJS is less disruptive and requires less warehouse downtime. The CJS system costs less than full-depth joint replacement and usually cheaper than retrofit dowels or subslab grout injection.

Alan Yuill, Director of CGFS, "We have already installed CJS at a warehouse in Northampton for a global logistics company. The problems associated with a rocking slab were soon rectified with 14 stabiliser cans located, cored and set to torque in less than 2 hours. The client was running MHE over the repaired joints within 5 minutes of the work being completed. In total, this section of the floor was only out of action for approximately 2 hours. We are really excited about the benefits this quick and easy repair method can bring to a customers warehouse operation."

To watch CJS video in action and for more information, please visit www.jointstabiliser.com



CoGri Joint Stabiliser installed



Ground path and fully operational aisle

The Italian Job

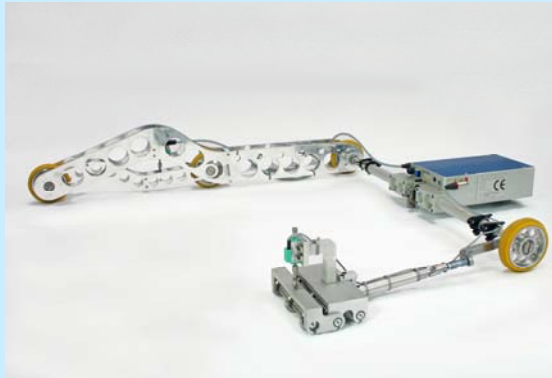
Concrete Grinding Ltd has successfully completed their LARGEST EVER FLOOR GRINDING CONTRACT in linear metres for a global glassware company in Italy.

The client's new DC floor was originally built by a flooring contractor using Laser Screed construction to meet with DIN 18202 floor flatness specification. Whilst the racking was being installed, Trimmer S.r.l Profilegraph surveyed sample aisles and found they all failed to meet DIN 15185, the required floor flatness standard for VNA operation. Trimmer S.r.l contacted Concrete Grinding Ltd, whom they represent in Italy, and Concrete Grinding Ltd were then commissioned to grind the aisles to tolerance. The very busy and operational warehouse facility consisted of 64 aisles, which were split in to 7 different compartments, totalling just over 5700 metres. Before corrective work commenced Trimmer S.r.l. surveyed the remaining aisles, Concrete Grinding Ltd analysed the data and identified that only 80% of the total aisle length required

(Continued on page 4)

FACE Fact on VDMA

Face Consultants (Face) are now able to offer floor surveys to the recently introduced VDMA guidelines with the introduction of the Face 'Fx'-meter as an attachment to its current Face Digital DIN 15185 Profileograph. This now enhances the family of Face Digital floor surveying equipment which already



covers TR34 (FM and DM), The American F number system (including F min), EN 15620, DIN 18202 and Din 15185.

Although Face can now survey the VDMA guidelines they do not currently endorse the recommendations as they have yet to be validated and peer reviewed.

Face Digital DIN 15185 Profileograph fitted with 'Fx' meter (VDMA)

In 2009 / 2010 Federation Européenne de la Manutention (FEM) drafted a guidance document (FEM 4.007) with recommendations for surface regularity which was based on the DIN 15185 specification but introduced a very small short wavelength control called "Fx". These recommendations were presented to the BITA - WITI Working Group (WG) on 14th July 2010 by members of the FEM Working Group 4. It was the decision of the BITA WG that it could not approve the FEM guidance note in totality and that further validation was required. Shortly after this meeting the FEM WG decided that the FEM 4.007 guidance note be removed from the table and the working group closed.

In September 2010 VDMA introduced a guideline "Floors for use with VNA Trucks" which is a slightly amended version of the FEM Guidance note rejected by FEM a few months earlier.

Face, with the assistance of BITA and their members, have started carrying out a number of surveys on existing installations where Very Narrow Aisle (VNA) trucks are operating at differing levels of performance. Each of the floors will be surveyed to TR34, EN 15620 and DIN 15185 as well as the VDMA Guidelines. Face are hoping that this study will help either validate the VDMA Guidelines or put forward recommendations from its findings.

Constructing, testing and grinding floors to a standard of flatness to ensure a degree of performance is not new and floor flatness specifications to control surface regularity for VNA, defined forklift traffic has been around since the late 1970's with the introduction of the ACI - F number system and in particular the F min numbers for VNA applications.

In the late 1980's the UK took a slightly different approach with the introduction of a floor flatness standard in The Concrete Society's Technical Report No. 34. (TR34). The terms; Superflat, Category 1 and Category 2 were born.

The DIN 15185 standard was developed specifically for VNA applications in the early 1990's from the general building tolerances standard DIN 18202.

In the third edition of TR34, a new surface regularity specification was introduced which looked at the floor profile as the truck actually saw it and based on the same principles of measurement used in the USA. This new specification is found in Appendix C of TR34.

In 2008 EN 15620 "Steel static storage systems – Adjustable pallet racking – Tolerances, deformations and clearances" was developed which included a surface regularity standard for floors with VNA applications. This European Norm is tested using the same principles as TR34 Appendix C recommendations with some slight modifications to the limits.

To read full report on 'Face Fact on VDMA', please visit www.face-consultants.com

Growing Strong in China

The incorporation of Face Consultants China has now officially been completed and its Technical Manager Macy Yang is starting to receive enquiries from companies interested in its Compliance Testing services. Its first Profileograph Survey was recently completed for an international electrical and electronics company and another Profileograph Survey will be carried out shortly.

Meanwhile the incorporation of CoGri China is well under way and is expected to be completed within the next couple of months. CoGri China is also receiving a number of enquiries from companies wanting to improve the quality of concrete industrial flooring in China.

In addition, we have recently opened the CoGri Group China office which is located on the 24th floor of the Xin An Building at Zhen Ning Road in Central Shanghai.

CoGri Korea

The second quarter of 2011 has seen CoGri Korea with its most frantic period of Sales activities ever, resulting in 7 new flooring contracts being signed.

The new contracts have included: - an 8,000 m² steel fibre reinforced concrete (SFRC) slab on grade (SOG), a small Freezer Warehouse; 2 Topping slabs for a leading electronics retailer in Korea; a VNA floor Construction project for a Pharmaceutical company and a steel fibre slab on piles project for another electronics firm. However the biggest challenge will be a 13,000 m² topping slab ongoing project for a multi-storey hypermarket for the largest retailer in Korea. Further contracts are also in final negotiations and CoGri Korea is currently investing in new staff and additional specialist plant and equipment to ensure that its high quality of services can continue to be provided throughout 2011 and into 2012.

Photo below: Recently completed SFRC SOG floor which is being used by a car manufacturer to store vehicles made in Korea prior to shipping overseas.



Making Australia Flat

CoGri Australia Pty Ltd has successfully completed their second Laser Grinding contract at a new warehouse facility in Queensland. The \$4.8 million Queensland drill core facility will store up to 700 kilometres of rock samples and help boost mining exploration in the region. A Civil, Structural and Mechanical Engineering Company was commissioned by the client to build the new facility.

The project required 9 aisles of 35 linear metres to be ground to TR34 Appendix C DM1 specification. The Laser Grinding team carried out whole aisle width grinding to 2.25 metres wide, which is slightly wider than most narrow aisles. This was because the client had not yet

decided on the type of the racking and VNA trucks, so this approach gave them greater flexibility for the future.

Face Consultants Pty Ltd carried out a Profileograph survey before and after grinding, and a report was issued proving the DM1 specification had been achieved.

The contractor's Business Development Manager added, "The construction comprised concrete slab floor with a structural steel building clad in concrete panels. In order to achieve the high flatness specification required at the facility it was decided to lay the floor using traditional methods. Post construction grinding was incorporated to guarantee the required flatness specification. We chose Face Consultants to survey the floor and CoGri Australia to

undertake the grinding works. The final results clearly demonstrated this was a wise choice. CoGri handled the operation with the minimum of fuss and completed the work within the expected timeframe. We would be happy to recommend them to any prospective Clients".



Warehouse facility in Queensland

A Cracking Outcome for CG Flooring Systems

This last quarter has seen CG Flooring Systems complete its largest and most technically demanding joint repair project to date. The repairs to the concrete floor slab at a large distribution centre in Birmingham, UK took place over a 10 week period between February and April, which saw almost 850 linear metres of joint and crack repairs being undertaken. Over 600 linear metres required the concrete arris' to be rebuilt using our tried and tested arris repair detail, or a modified arris repair detail, was used to treat large cracks within the warehouse floor.

An approach was made to CG Flooring Systems asking if we could provide a solution to repair the existing floor joints and cracks in the warehouse floor. The challenging aspect of this project was to find a solution for the larger cracks that were present in the centre of the floor panels, which have joints at 12m centres. It would appear these cracks have effectively taken the place of an absent sawn joint. After an initial site visit and a further period of consultation with the client and their engineering consultant, it was agreed that a trial repair would be done and assessed over a period of time. The trial repair was a modified version of our Type 1 Crack Repair detail, which unfortunately was not successful. After a period of approximately 6 weeks, cracking around the repair detail was evident and this was obviously not an acceptable solution for the client.

Our initial thoughts based on the observations from the trial, were that the cracking could be caused by either poor load transference or thermal movement. A further visit to site took place to look at the floor in more detail under operational conditions and this involved monitoring the Materials Handling

Equipment (MHE) as they passed over the floor. No physical or visual indications of differential slab movement were observed and it was agreed at the time that there did not appear to be a problem with the load transfer capabilities of the floor slab. It was therefore concluded that the appearance of cracking was a result of thermal movement.

Subsequently it was decided the best solution for treating these larger cracks was to carry out a modification to our arris repair detail that would effectively leave them finished as a meandering joint. The key to the success of the modified repair detail was to ensure the crack was mirrored through the joint sealant and this was achieved by pre-forming the joint sealant and applying in strips along the path of the crack. The specialist CoGri Repair Mortar was applied either side of the joint sealant, prior to finishing the repair flush with surrounding floor profile, to ensure a smooth transition over the floor for the MHE.

This was a technically demanding project that required no shortage of skill and patience from the Technicians on site, as they carried out the repairs with the clients operation continuing around them. A project of this nature highlights the benefits of using an industrial flooring specialist, who not only understands the issues of dealing with a concrete floor, but also takes pride in understanding how the floor is used by the customer. CG Flooring Systems called not only on their years of experience in repairing concrete floors, but were also able to call on the experts within the CoGri Group of companies, to ensure the best possible solution was available for the client.



Joint repair in progress

Middle East News

The new CoGri and FACE Middle East warehouse and office, situated in Jebel Ali Industrial Zone, close to Jebel Ali Free Zone, is now operational. There is still some minor fitting out to do and cosmetic touches to the meeting room, office and reception area.

On the commercial side, there is a steady stream of new enquiries coming in. These are focused on floor repair work, and new facilities. CoGri Middle East are seeing an increase in the amount of potential work for constructing new warehouse floors. This is further enhanced by our growing reputation for delivering a high standard of work, with a professional approach.

Last year we were involved in approximately 130,000m² of design, on-site supervision, wire guidance installations, survey work & repairs, and already this year we are involved with approximately 200,000m² of floor design and on-site supervision.

Despite the recession we are experiencing continual but cautious signs that the logistics & warehousing sector is moving forward, with some new warehouse extensions, and even new warehouses being announced.

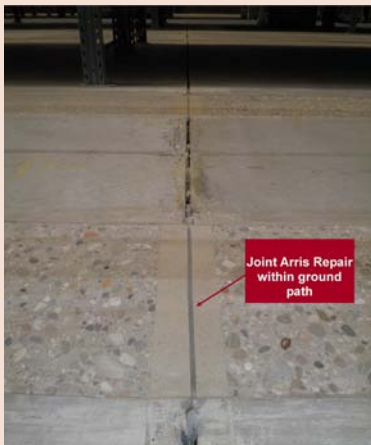
In addition, we now have a dedicated live website for CoGri Middle East LLC, www.cogrimiddleeast.com. Please visit the website and let us know what you think. Please send any feedback to cogrinews@cogrigrp.com



The Italian Job

(Continued from page 1)

remedial grinding. As Concrete Grinding Ltd are the only superflat floor grinding specialist in the industry that could laser ground exact areas out of specification rather than the whole aisle, the client commissioned Concrete Grinding Ltd to grind the aisles to specification. This also benefited the client as precise corrective grinding provided a cost-saving solution.



Joint Arris Repair within ground path

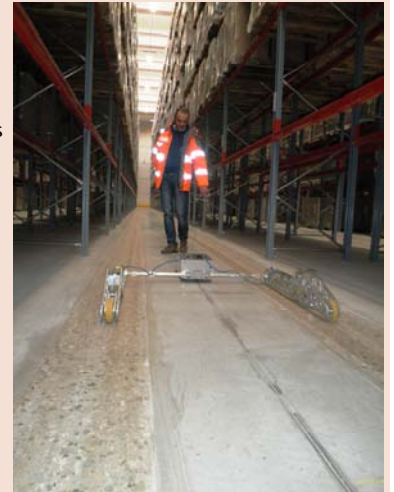
To meet with the client's deadlines, Concrete Grinding Ltd operated two Laser Grinders and carried out 2 wheel track grinding x 400mm cut paths on 4570 metres of aisles. The facility operates B.T. (Toyota) 4 wheel fork Lift trucks where the wheels fitted perfectly within the 400mm cut path. The grinding program was executed on a 5 aisles rolling program so that the client's warehouse operation could function as normal.

Concrete Grinding were also asked to carry out floor joint repairs in the facility. With assistance from CG Flooring Systems Ltd, the team carried out 110 metres of joint arris repairs and 1200 metres of joint reseal repairs within the 400mm ground path to cater for the wheels of the trucks. This

resulted in an additional cost saving as the whole aisle width did not have to be repaired. The saw cut joints were resealed every 4 metres along each aisle. 50 metres of joint repairs were also completed within door openings between the 7 separate compartments. A large portion of the joint repairs were completed immediately after Christmas, during the client's shutdown, ahead of grinding work.

After grinding, Trimmer S.r.l. re-surveyed the aisles using the FACE DIN Profileograph to prove the floor flatness specification had been met.

The client's Managing Director and Project Manager were involved in the project. They were very happy with the work Concrete Grinding Ltd and Trimmer S.r.l. had carried out. "We were very impressed with the quality of Concrete Grinding Ltd's and Trimmer S.r.l.'s work and commitment to the project. The Laser Grinding work did not interfere at any time with our busy warehouse operation. We also had a very strict time table and the grinding and repair work went according to schedule. We chose Concrete Grinding because of their precision laser grinding system and their flexible approach to our requirements. We are extremely pleased with the overall results".



Trimmer S.r.l. testing floor flatness using the FACE DIN Profileograph

"ROOF CAPPING" Party with IKEA

After months of working in Thailand for IKEA on a 28,000m² of 75 and 100mm bonded topping slab, CoGri Asia was invited to the infamous "ROOF CAPPING" celebration held by IKEA.

The Roof Capping Party is a traditional Swedish party originating from the time when neighbours were involved in building each others houses. The party was held to thank the people involved for the help once the roof was capped.

This party was held on the eve of the 9th of March to celebrate the exciting milestone on finishing the roof capping of IKEA's first store in Bangna. Guests included VIPs from the Swedish Embassy (H.E. Mr. Lennart Linnér), Swedish companies in Thailand, suppliers to IKEA, and contractors etc. Along with Swedish food and music, guests were able to



browse the store and experience the self-service ambience in the gigantic warehouse. This was the first time CoGri Asia attended such a celebration and was indeed an enlightening occasion.



This was also a proud moment for CoGri Asia as their newly constructed flat floor was opened to the public, in operation as well as looking incredibly polished under all the lighting, capturing every reflection during the event.

New Appointments



The CoGri Group welcomes Alex Lee, Thomas Rochford and Cliff Anders to the team.



From top: Alex, Tom and Cliff

Alex joined CoGri Asia Pacific Pte Ltd in March 2011 as their Regional Contracts Manager. Alex has a Civil Engineering degree from the Nanyang Technological University of Singapore. He previously headed a division in a German multi-national corporation dealing in building automation products in S.E. Asia. He also has 6 years experience in marketing and business development with a Korean engineering conglomerate with focus on heavy civil and infrastructure projects. Prior to that, Alex was a project manager for a French contractor successfully completing several major retrofit and

building projects. Alex is excited about joining CoGri and is looking forward to his new role with the company.

Tom joins as CoGri's Digital Marketing Executive. Tom started working as a reporting analyst for a consultancy firm in London where he worked with clients such as Emap, Egmont and the New York Daily News. Tom has a marketing degree and will be responsible for implementing and continually improving online marketing activities of the Group's portfolio including the company websites, SEO and PPC strategies.

Cliff joins Concrete Grinding Ltd as their Junior Technician. Cliff initially assisted as a casual labourer on projects in Italy and Australia, but following his hard work has now been made a permanent member of the CG team. Cliff's experience included working for a construction company in Wakefield for 5 years.