

14 November, 2017

## Portugal Trip Report – November 2017

### ITINERARY

		CENTIMFE (CEFAMOLD), TJ Moldes, JP Tool (Grupo Vangest),
Mon	06-Nov	Moldegama
Tue	07-Nov	Simolde, Prifer, Moldit
Wed	08-Nov	Cheto
Thur	09-Nov	Noras Performance, Canadian Embassy
Fri	10-Nov	Moldplast Trade Show

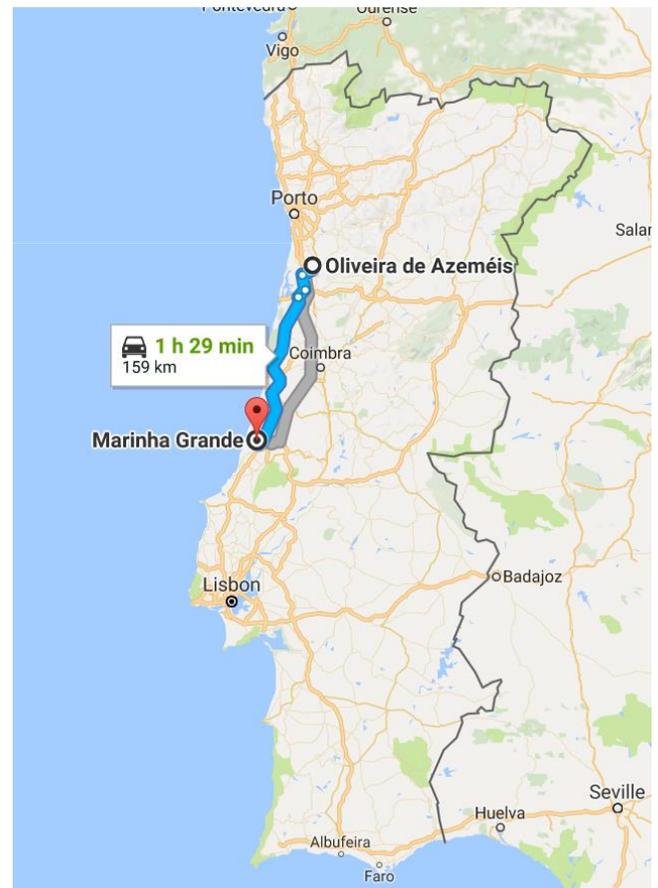
### PORTUGUESE ECONOMY

While Portugal is considered the 3<sup>rd</sup> poorest country in the Eurozone ahead of Greece and Estonia only. The Portuguese economy has been in growth mode since 2014. It is evident that the mold industry is thriving and expecting continued prosperity. CapEx for 7 of the 8 shops was healthy with Simolde topping the list at C\$32M for 2017 on production machinery alone.

### PORTUGUESE MOLD MAKERS

The tour was arranged by CAMM board member Joe Poulin of Elliott-Matsuura and hosted by them and one of their manufacturing partners Cheto Corp. <https://www.cheto.eu/pt/>. Many thanks to Carlos Teixeira, Principal of Cheto for arranging and scheduling the 2-day tour.

We visited 8 mold manufacturers. All of them in the C\$18M sales and above and included Grupo Simoldes, the largest Mold Manufacturer in Europe (sales of C\$375M). Moldmakers in Portugal are primarily concentrated in two areas in the central to northern Portugal. Marinha Grande and Oliveira de Azemels. All shops we visited indicated their primary market is automotive (reporting 90% to 100% range). Seven of the eight were high pressure injection and one was large compression mold manufacturer. Their markets include Europe – including UK, USA, Northern Africa -Maghreb plus Egypt, South America – Mercosur, Mexico and to a lesser extent Australia.



The plant infrastructures were generally seen to be in a reinvestment mode. All but one were in various stages of replacement of old equipment other than Prifer which had all new equipment and building. Their large CNC machines were either 10-20 years old or newer than 5 years old with most new equipment less than 3 years old. This is indicative of an industry that was dormant and only



recently has seen a rebound worthy of healthy CapEx. It is worth noting that while the equipment is primarily European (purchased in native currency – Euro), the trend seemed to reflect Portugal’s delayed recovery of the 2008 economic downturn and the Euro’s downward trend since 2014.

The technology employed by the shops we visited was primarily centered around metal removal – CNC machining and EDM. The acquisitions we almost exclusively European and dominated by names like DMG, Mecof, Huron, OPS-Ingersoll, Charmilles, ONA, Millutensil, IMSA and Cheto. Surprisingly very little (new) Japanese machine tools were evident although Simoldes did indicate their small tool factory did rely heavily on Makino. New acquisitions in the milling machine department were almost exclusively 5-axis and employed palletization and robotics. Cutting tool technologies mirrored what we use in North America while modular work holding – FCS and FPT - is still almost non-existent (exception Prifer which is 100% FCS). Erowa style work holding was evident in several EDM departments but mechanical clamping is still the preferred method of holding workpieces however I would expect that to change as FCS has targeted the Portuguese market. There was also no evidence of any spindle utilization monitoring software – Lemoine Pulse, R.E.R InFocus etc. CAD and CAM software was dominated by Catia and NX (CAD) and Tebis (CAM) all widely used in NA as well. Tool construction was very much like seen in NA Midwest, using large solid blocks with big ‘tub’ locks as opposed to ‘shoe and insert’ style preferred by LCC companies. Portuguese toolmakers have embraced purchased component strategies utilizing specialized process optimizing ‘gadgets’ (for lack of better word) like threadless water plugs.

Portuguese tool shops work at a different pace than NA tools shops None that we spoke of ran 24/7. Most ran 2 shifts during the week only. Work weeks are 44 hours with graduated overtime 125% (x hourly wage) first block, 150% second block and 200% after that. Blocks were 2 hours so wages increase quickly. The pace of the shops varied with the size. Smaller shops tended to be slow paced while the bigger were more engaged but still far from the hustle we see in NA shops. Wages were not openly

discussed in detail, but anecdotally regular pay is 10-20% below Canadian skilled trade wages.

Quality is a big part of their manufacturing culture. All shops had Quality departments that included CMMs and 'Roamer' style shop floor measuring devices. Both contact and non-contact measuring were used. One company stated that they have 100% validation of all electrodes. Another used the roamer arm with a scanner head to validate machining. Scanning is overlaid with data and any concern areas are hand probed for validation before removal from the machine. Some companies were using machine mounted touch probes to validate 2D work before completion.

The shops we toured were not a scientific cross section. Their technology ranged from all new machines at Prifer to no new equipment at MoldIt. While they were very accommodating there was also evident an underlying suspicion as to our purpose. One shop asked us why they were helping their competitor.

## **CEFAMOLD/CENTIMFE/TOOL NET**

Portugal's moldmakers association is CEFAMOL. Similar in function to CAMM. Their function includes similar mandates. They are also part of ISTMA who are affiliated with CTMA in Canada. They represent 130 mold manufacturers and special tool manufacturers. They have also facilitated a sub organization CENTIMFE/POOLNET. This is a not for profit company that is helps members with design, engineering, prototyping and R&D, joint ventures and subcontracts services to its members. Such as 3D printing of parts, tool calibration services etc. Their calibration services are performed in a lab with rigidly controlled temp and humidity that is constantly recorded for traceability. When we entered the lab, the technicians ceased measuring as we altered the environment. We were informed it would take several minutes after we departed to restabilize the room. Members buy shares in the organization to access the services, but they are still charged. They also work with schools and bring two age groups in regularly to do hands on projects. The equipment in this facility ranged from micro machinery to regular lightweight machinery. Included are CAD and CAM systems for internal and student use. This is a very well-funded business with 40 employees. I am unsure how the business model works, but I assume there is government support.

## **MOLDEXPO**

The Portuguese mold show is held each year and alternates between the two mold centers mentioned above. This year it was in Marinha Grande. The show is considered regional by the industry. While somewhat larger than Amerimold it is dominated machine manufacturers, all of which had working equipment in their booths. Displays were of a caliber expected at an NPE level with machining, laser engraving and even plastic molding being demonstrated. Equipment suppliers all had extensive displays with hands on capability. Most major CAD/CAM software that are familiar to NA were also being demonstrated there. There was only one mold manufacturer displaying at the

show, the rest being suppliers. The only evidence of Far East participation was at several machine tool distributors that included equipment from LCCs.

#### TRADE COMMISSIONERS MEETING

We had the opportunity to meet with the Trade Commissioners office at the Canadian Embassy in Lisbon. We met with Senior Trade Commissioner Anne-Marie Parent and Trade Commissioner Fatima Carvalho. This was a very preliminary meeting to make the office aware of our activities. We sat at a conference table and introduced ourselves and stated our purpose. We were looking for opportunities to cooperate with Portuguese shops that might be interested. Their office had been very busy with the Web Summit conference taking place that week in Lisbon. It appeared they did not have much prepared for our delegation. They did accept a thumb drive with our new presentation on it and suggested that there may be opportunities in the Aerospace sector. They offered to facilitate a web meeting if we wanted to make a presentation to the Trade Commissioners around the globe. This is something CAMM should investigate. We would need a master presentation to facilitate this meeting.

#### CONCLUSIONS

Portuguese moldmakers are in a rebuilding stage overall with some ahead of others. There appears to be no shortage of work for them and they are an industry looking at the current world economic climate favourably for the next few years. There appears to be government support for the industry. None of the mold shops referred to any programs directly, however one German machine manufacturer did say there is a EU driven program referred to as the 2020 program that many countries (including Portugal but not including Germany) could use to buy capital equipment. The program required 20% company contribution matched by EU with very low interest loan for the balance. It did require evidence of international trade. He indicated most moldmakers are accessing the program and pointed to the large number of shops with booths at Fakuma in order to fill the trade requirement. Their industry is also very well represented at the association level with significant funding and resources available to the members. CEFAMOLD works directly with policy makers at the government level and claims to have strong industry influence. They are also actively working to network their members to promote the “Portuguese Tooling Network” as a global player (the Tool-net logo is prominently featured in lobbies and literature of the member companies).

