

## Shaun McMahon -Summary Biography-

A child of the 1960s McMahon started his railway career on the 2' (60cm) gauge Ffestiniog Railway (FR), in North Wales, which passes within earshot of the family home. Starting in the 1970s as a volunteer, then later as a paid employee, he was working at Boston Lodge Works at the time Phil Girdlestone converted Hunslet 2-4-0st-t 'Linda' from oil firing to coal firing on the Gas Producer Combustion System, amongst other important enhancements. This exposure to the technologies and approach of Ing. L.D.Porta (1922-2003) has shaped his career to this day.



Formal training provided by the FR saw him ultimately appointed as Technical Assistant to the Workshops Manager at the FR's Boston Lodge workshops. Additionally he progressed up the ranks in the locomotive department to become a fireman and subsequently a steam and diesel locomotive driver. He was also a director of the Ffestiniog Railway Heritage Group, serving on the board from 1984 to 1990. However ultimately his interest in the potential to improve the steam engine started to take him in other directions.

During 1991, a visit to the Snowdon Mountain Railway (SMR) introduced McMahon to the work of Nigel Day. Day's work on detail improvement of the SMR rack tank locomotives had moved into the field of experiments with advanced exhaust systems. The two quickly struck up a firm friendship, with each others areas of knowledge complimenting the other. Day wished to learn more about oil firing and explore its more widespread applications, experience of which McMahon had plenty of from the FR and Vale of Rheidol Railway (VoR).

Unable to carry out the sort of work he wished McMahon moved from the FR to the employment of the Hills & Rampton railway operating and engineering business partnership. This company already owned the Brecon Mountain Railway (BMR) and had just purchased the VoR from British Rail. As Locomotive Foreman at Aberystwyth Motive Power Depot, McMahon was closely involved with the rehabilitation of the VoR which had been left badly run down in all areas by British Rail in the years leading up to its sale to the private sector; he also spent some short periods of time working at the company's BMR in Merthyr Tydfil, South Wales.



In parallel to their day jobs Day and McMahon set up 'Day & McMahon Steam Technical Services' in 1992 to provide locomotive consultancy with a modern steam slant. Emphasis was placed on redesign of exhaust and combustion systems along with the application of advanced boiler water treatment. The pair were contacted by the Welshpool and Llanfair Light Railway (WLLR) during the early part of 1993 so as to provide a solution to the increase in the number of lineside fires attributable to sparks emitted from their locomotives' chimneys. The then current draughting arrangement did not allow the locomotives to be fitted with effective spark arrestors which also enabled the locomotives to steam sufficiently to keep to schedule. Investigation lead to the fleet being equipped with Lempor exhaust systems proportioned to fit within the existing external chimney dimensions. As a result of the modification work carried out, even with the fitting of full spark arresting the

locomotives, were found to use less coal and water to do the same task. At the WLLR McMahon and Day also oversaw the introduction of an advanced water treatment regime in conjunction with M & S Water Services.

Following Girdlestone's departure from the FR, McMahon had kept in correspondence with him. Then working for the 2' (60cm) gauge Alfred County Railway (ACR) in South Africa, as Chief Mechanical Engineer, Girdlestone had applied Porta's philosophy to a pair of NGG16 2-6-2+2-6-2 Garratts, reclassified as NGG16A. The flow of information from South Africa to Mid Wales prompted McMahon to visit ACR during 1993 and ultimately lead to him becoming Assistant Chief Mechanical Engineer to Girdlestone in 1994. The post had become available due to an expansion and reorganisation of the railway in conjunction with its take over bid of the Avontuur branch line, based at Port Elizabeth, and an export contract gained in order to supply the Ffestiniog/Welsh Highland Railway with steam locomotives, trackwork and rolling stock. This move, naturally, lead to the ending of the working partnership with Day, who continued the UK based work alone from 1995 onwards.



Several interesting and challenging years were to follow at ACR with much experience gained of the modified Garratts. It can perhaps be said this was the formal introduction to the serious, and often harsh, world of steam locomotive improvement outside of the preservation and tourist railway environment. However it was also a time when much effort was expended on the run down engineering infrastructure of the ACR; one good example of this being keeping the timber off loading/loading gantry crane at the ACR's Port Shepstone terminal in working order. Without it not only was ACR crippled, but most of the Spoornet (formerly South African Railways) mainline network as far as Durban and further north to Richards Bay due to a bottleneck effect on cargo transhipment from narrow to broad gauge rail vehicles.

ACR suffered from severe (and government backed!) competition for freight from road haulers which saw the cancellation of the planned new build NGG17 class Garratt, the planning for which McMahon had been closely involved with. This project cancellation precipitated the collapse of ACR in the late 1990s.



McMahon had known Porta since his days in Wales. He had already turned down the opportunity to work directly with Porta on the completion of his Cuban 1816 and LVM800 projects as he wished to remain in South Africa in order to gain valuable experience. At the time of the offer, during 1995, the ACR NGG17 scheme was very much on the agenda. However by 1998 the situation was different. With the writing on the wall at ACR Porta suggested McMahon firstly look at a 5' 6" (1676mm) gauge mainline steam hauled train service project

planned to operate from the Argentine capital, Buenos Aires, to the very popular seaside resort of Mar del Plata and secondly a small narrow gauge railway in the very south of

Argentina – both the mainline and narrow gauge railway projects were under the direction of the same company. The 50cm gauge Ferrocarril Austral Fueguino (FCAF), in Ushuaia, had already contracted Porta's services but needed a resident engineering and railway operating expert as did the broad gauge project further north. Thus in 1999 McMahon moved to Argentina, firstly working on a National Government project proposal for a narrow gauge steam operated rack/adhesion railway on Isla Victoria, Bariloche, before moving south to Ushuaia so as to take up the role of Technical Manager of FCAF. It was originally intended that McMahon would stay in Ushuaia for a time period of no more than two years before moving north to live and work in Mar del Plata on the broad gauge modern steam project, however a change of national government at the end of 1999 put paid to the broad gauge scheme and all efforts were put into the upgrading of the FCAF so as to cope with an ever increasing volume of tourist traffic.

Over a five year tenure a great deal of work was undertaken. Almost every aspect of the railway's operation and infrastructure needed attention there being no railway culture in the area prior to the coming of FCAF. Rapidly rising passenger numbers quickly showed the line's two locomotives to be inadequate for their task. Not only were they lacking power but their reliability was nothing more than absolutely awful. Much time was spent keeping things in some sort of running order, however where possible modernisation was undertaken. Porta type water treatment was introduced at an early stage, whilst both locos were rebuilt. Firstly 2-6-2t No.3 'Camila' was given a light upgrading in the Porta mould. Then K class Garratt 0-4-0+0-4-0 No.2 'Nora' (erroneously claimed to be the first locomotive constructed in Argentina) was given a much heavier rebuild (being converted to KM class). On return to service in 2001 the locomotive was re-named 'Ing. L.D.Porta' in recognition of his 80<sup>th</sup> birthday.



Other work was undertaken during his tenure at FCAF for the parent company Tranex Turismo S.A. This included consultancy work in Chile and India as well as further work within Argentina. This included strategic and technical assistance to a group of Río Turbio Railway workers, at Río Gallegos, who had restored locomotive 117 to partial working order in return for spare components from one of the laid up Mitsubishi locomotives at Río Gallegos. These parts were for use in conjunction with the further steam locomotive rebuilding work at FCAF.



With a great deal achieved on FCAF, 2004 saw McMahon move on, much in the way Porta would have done. Whilst the 5'6" (1676mm) gauge work had never materialised, other work was forthcoming in Argentina. Working as a "Steam Locomotive and Rational Use of Energy Engineering Consultant" he has been contracted to undertake various tasks within the Argentine industrial and energy generation sectors. Additionally he is working in the field of renewable fuel transport development and power generation in the USA and other countries.

Perhaps most prominent of these roles is his very close involvement, as Technical Consultant in some areas and Technical Director in others, with the rehabilitation of the coal carrying railway from Río Turbio to Río Gallegos, famous for one of Porta's greatest successes. The scheme involves bringing the lines 75cm (2' 5½") gauge 2-10-2s up to the latest engineering and operational standards in addition to extending the railway into Chile by some 60 km (37¼ miles) for coal and general freight traffic along with commercial and tourist passenger purposes forming a strategic bi-national transoceanic and transpatagonic transport corridor. Allied with the railway project is the upgrading of the Río Turbio coal mines, the purchase and installation of a new 70 MW coal fired power station in the Río Turbio industrial valley along with the introduction of steam road vehicles in the area. All will use locally mined coal as a



fuel thus keeping in line with the governments national policy of not having to rely on oil in the face of the current national and international energy crisis. As this is written in 2006 quiet, yet steady, progress is being made with this project which will take a number of years to complete.

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