

Loco Shed

APHTRO Newsletter No. 2

30 August 2012

It's now six months on from the first Newsletter and Working Group members have made progress towards launching the organisation at the next conference.

The wood in the firebox burns; the coals begin to glow; we are raising steam to move our engine; water level is good; the tender has coal and water; lubricating is done: now we'll bring pressure round to the red line!

Towards the Launch

Resolutions discussed and agreed at our first Working Group Assembly at the Annual Conference in Indonesia in June (name of the organisation; objectives; administration; and membership programme) were forwarded with our Constitution to all Working Group members.

Bi-weekly on-line (Skype) meetings have been held from late July for any important discussions and decisions. Results so far and further items to be discussed:

1. Administration

Skype discussion members should be Council members.

Current structure proposed for agreement at next conference:

Patron - David Morgan TD MBE

President - Kyoichi Oda

Vice president(s) (up to 2) – to be decided (TBD)

Council Memembers - TBD

Secretary - TBD

Treasurer – TBD

2. Website

The domain name **www.aphtro.org** has been secured and set up with great help from Jaime Tiongson and Kibu Hsieh.

Proposed website contents are: About Us; News; Administration; Members; Membership; Conference; Links; Downloads; Contact; and Members' Page.

The website will be set up initially as a plain version, changed to a (brilliant!) designed version by Arrianne Lea Caringal after our next conference.

3. Corporate registration and Bank account

Corporate registration is needed in some English-speaking countries: New Zealand; The Philippines; India. A Paypal Business Account will be used as our bank account: a corporate address is a requirement.

4. Fundraising

We need to raise funds for our activities including conference so will seek financial support. Ella Ubaidi - well experienced in fundraising - hopefully would help.

5. Conference Venues

Conferences planned so far, from next year:

2013 - Kota Kinabalu, Malaysia (TBD)

2014 - Kaohsiung, Taiwan

2015 - Manila, The Philippines

Indonesian Railways are also holding their own conference in September 2013.

The resolutions and a final vote to launch the organisation to be decided at next Conference in June 2013.

Our New Members

In the six months since the last issue appeared, two more representatives have joined as Working Group members:

Mr. Kibu Hsieh - Chairman, Railway Cultural Society Taiwan

Mr. Hj. Mohd. Zain Hj. Mohd Said – General Manager, Sabah State Railway, Malaysia

The Group now consists of members from eight countries: **New Zealand, Japan, Taiwan, The Philippines, Malaysia, Indonesia, India and Jordan.**

Conference Report

The first **APHTRO** Conference was held in Solo, Indonesia on 7 - 11 June 2012. Delegates from four countries plus **WATTRAIN** President, Mr David Morgan joined the programme.

On the first day, Thursday 7 June 2012, delegates gathered at the Office of Conservation and Heritage Centre of Indonesian Railways in Jakarta Gambir station. The train 'ARGO DWIPANGGA 10' departed 08:00, taking them and two Indonesian Railways staff, arriving at Solo Balapan station around 17:00. Registration and dinner followed at the conference hotel - Roemahkoe Heritage Hotel - beautifully restored from an old Javanese style house.

On day two, Friday 8 June, a chartered bus took delegates to the railway museum in Ambarawa, 60km NorthWest of Solo. A couple of rack rail steam engines (B25) are operational for chartered trains on two sections from Ambarawa. Another engine is being restored to cope with increasing numbers of passengers. The steam train made a journey to Tuntang station along a scenic lakeside route. The train then went in the other direction to the middle of the rack rail section beyond Jambu station for delegates to enjoy the tropical mountain view.



On Saturday 9 June delegates took a chartered bus at 07:30 to ride the "Sepur Kluthuk Jaladara" steam train on a round trip between Purwosari station and Solo Kota station. For much of this route the track is on the road in central Solo city. Friendly local people on motorbikes, cars and bus waved to the train escorted by traffic control policemen. Second place visited was the Tasikmadu Sugar Mill, in a suburb of Solo city. This sugar mill is still working but part of its railway facility is used for a small tourist train in an amusement park. A Borsig 0-4-0 steam engine hauled the little train that delegates shared with a kindergarten group. The train runs inside the sugar mill and looked a good idea to let passengers observe and learn.

Sunday 10 June was the day for a conference business session at Roemahkoe Heritage Hotel. Kyoichi Oda's opening remarks introduced an address by David Morgan. Apologies for absences - New Zealand, The Philippines and India - followed. After a break, five presentations by delegates depicted heritage railways in the Asia - Pacific region. Rezza Habibie and Safitri DwiWahyuni from Indonesian Railways showed the history of their railways and their activities. Kyoichi Oda described similarly for Japan. Then Kibu Hsieh from the Railway Cultural Society, Taiwan introduced past and present Taiwan heritage railways. Maisoon Shaheen described history and their work towards reviving Hijaz Railways. Finally David Morgan did a presentation about HRA, FEDECRAIL and WATTRAIN.



On the final day, Monday 11 June 2012, a General Assembly was held to discuss four objectives and future resolution: the name of the organisation; its objectives; a membership programme; and an administration plan. Ideas were exchanged about progressing the website; fundraising; office; bank account and the next conference. (Photos: Rezza Habibie)

Conferences and Meetings Calendar

APHTRO members

RPSJ Annual General Meeting 2012 (Japan)

18-19 October Wakasa town, Tottori prefecture, Japan

Contact : Junichi Yoneyama, yoneji1122@yahoo.co.jp

Railway Heritage Conference 2013 (Indonesia)

Around 28 September (TBD), Jakarta, Indonesia

Contact : Ella Ubaidi, ellaubaidi@yahoo.com

FRONZ Conference 2013 (New Zealand)

31 May - 3 June, Oamaru, New Zealand

Contact : Peter McCallum, secretary@fronz.org.nz

International Organisations

WATTRAIN Congress 2012 (Worldwide)

30 September - 7 October, York, UK

Contact : Ian Smith, i.b.s@btinternet.com

ATR&RM Annual Conference 2012 (North America)

5-11 November, Montreal, Canada
Contact : Suzanne Grace, scg@lagniappeassociates.com

FEDECRAIL conference 2013 (Europe)

11-17 April, Toulouse, France
Contact : John Fuller, jrfuller_chalk@yahoo.co.uk

“GREEN” ALL-FUEL OPERATION – THE FUTURE?

Reinhard W. Serchinger

Commercial viability is the primary concern in the operation of any business, and heritage railways are no exception. If volunteer labour is used, fuel costs account for an even bigger percentage of overall cost than in an ordinary commercial railway company. Environmental improvements in steam locomotive operation have a direct and massive impact on the fuel bill and thus on the commercial performance of the railway!

On Zillertalbahn #5, a 1930-built 760 mm-gauge (2'6") superheated 0-6-2 tank engine, conversion to the SePhys oil-firing system doubled the (thermodynamic) fuel efficiency in regular operation, eliminated neighbour complaints and the fire risk, and saved 2 man-hours each day of operation. On average over all crews and round-trips, 665 litres of tax-exempted diesel fuel (478.80 EUR delivered on site) substituted for 1.6 tonnes of hard coal (480.00 EUR delivered on site). Staff competence is a crucial factor, though. The best crew, using a steady 30% cut-off on the whole trip, burnt 550 litres, whereas the worst, running in full gear all the time (even at top speed!), used up 990 litres in the same service!

The Austrian government has just announced that railways will not be exempted from diesel fuel taxes any more. Therefore, cheap alternative fuels have a high priority on the agenda again. In order to be able to use a variety of liquid fuels (whichever are the best value at any given time), the SePhys oil-firing system is made exclusively from stainless steels, employs only FAME-resistant (biodiesel-proof) seals and gaskets, and incorporates both an electric and steam tank-heating system. On December 13, 2011, crude ester, a residue of biodiesel production, was tried out as a fuel on #5. This experimental run showed that both the fuel preheating system and the SePhys burner lances were able to handle this fuel in principle; however, the fuel delivered to Zillertalbahn for the test was not quite up to the specs given by the manufacturer. It contained a brown liquid phase which burnt well from a preheating temperature of 40 °C onwards (in line with the specs) and a black muddy phase which was sprayed unburnt through the burner flame to the firebox walls (centrifugal separation by the burner swirl) even at a fuel preheating temperature of 71 °C (not in line with the specs). A slight modification of the atomizing piston of the burner lance is reckoned to further improve the burner lance properties when viscous fuels are used without impairing their excellent performance with diesel fuel.

Development work is to continue in 2012, especially with the 44 0225-1 EO (Eco Optimized) project in mind. 44 0225-1 is an ex-DR (East German) 2-10-0 3-cylinder standard gauge freight loco on which the ultimate goal is a "green" oil-firing system for practically all liquid fuels so that the operator (the Danish Rent-a-Lok company) can switch to whichever fuel is cheapest. This is very important for the financial sustainability of the railways which for most of them is a bigger problem than ecological sustainability! Preliminary design work on the two-chamber tender tank with 10,000 litres of all-fuel capacity (heated) and 3,500 litres of diesel-fuel capacity

(unheated) for firing up the loco without auxiliary steam and the high-power all-fuel burners has started.

The same all-fuel strategy should apply to the traditional coal-burning steam locomotive. Preliminary thought has been given to an all-solid-fuel system which is a development of Porta's GPCS. The ultimate goal here is to be able to burn scrap wood, sawdust briquettes, lignite, hard coal, and synthetic coals - whichever is cheapest at any given time - in one properly modified loco, again for both financial and environmental sustainability. Unfortunately, there are no customers, no funds, and no sponsors for this project yet. Maybe the resurgence of coal mining in the UK will open up funding possibilities for HRA member railways and a joint project modifying a British coal burner.

Coal ash can be disposed of by using it as a fertilizer in gardens provided there are no heavy metals in the coal. This was standard practice in Austria and parts of Germany still in the 1970s. I have ash data for German coal. Unfortunately, the mine (General Blumenthal mine) was closed. However, such an analysis could be carried out for the coal used by HRA member railways. Perhaps the UK suppliers might be helpful and do these analyses in their labs for free.

For more information, contact info@sephys.de.

(This Article is contributed by Reinhard W. Serchinger)

This Newsletter cannot be sustained without fresh content. All latest news, photos, articles etc. from your heritage railways will be welcomed.

The next issue will be appear in February 2013.

Kyoichi Oda

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(I would like to thank *tw* for checking the draft.)