



## SASTT NEWSLETTER JANUARY 2004

I trust that everyone had a well-earned rest over the festive season and is ready for the challenges of the New Year. Apart from general news items, there is an article on pipe ramming by Craig Burnie of Wirtgen giving a general overview of the topic. Such articles are always welcome and really add value to this newsletter, because they inform the readers. They may take time to prepare, but they make a valuable contribution to TT in our country. Members are urged to make contributions to this newsletter, be they about projects, new techniques or of general interest to the S A trenchless industry.

**SASTT AGM** This will take place at 15:00 on Thursday 19 February. The guest speaker will be Mr Riaan Taljaard, Divisional Manager Investment Delivery of Johannesburg Water. He will enlighten us on "A Brief View on Johannesburg Water' Experience with Trenchless Technology. It is of real value to the TT industry to hear the views of decision makers in the client organizations, because it is they who have to face the tough decisions about the installation and rehabilitation of services, subject to political, social, environmental, technical and economic constraints. The more the industry understands how these decisions are made, the more effective the industry will be in meeting the marketplace's demands.

Please diarize this event and make the effort to attend. This is one time in the year when the members can meet and have the opportunity to air and share their views and make a contribution.

The venue is the auditorium at the School of Concrete Technology, part of the Cement and Concrete Institute, Old Pretoria road, Midrand. (Please find map attached)

**Call for New Board Members** The board of any organization needs a combination of the old and the new. The international TT industry is driven by innovation – looking for and developing better ways of solving old problems. If SASTT is to fulfill its role of promoting TT, it is essential that there is new blood with new ideas on the board, prepared to make a contribution to the industry. There has been little response to the request for nominations. If anyone has additional nominations, please submit them.

### **International Events (from previous newsletter)**

There is a lot happening in the world of Trenchless Technology that we do not hear about. There just

might be a reader whose travels take him to a destination where a TT event is taking place at the same time and there could be the opportunity of bringing information back to South Africa. Hence the calendar of events from the latest No-Dig magazine has been included. If any SASTT members intend going to any of these international events it would be appreciated if they inform Alaster, Glen or Paul as there may be particular information needed that could be gathered.

### **ISSUES ON THE BOARD'S TABLE**

**Proposed Seminar in the Cape** Following the successful seminars held at RAU during September 2002, and in Natal during June last year, a repeat event is being planned for the second quarter of this year in Cape Town. Anyone who would like to find out more about this should contact Mike King on 083 277 1119 or myself.

**Standard Documents.** Both Tshwane City Engineers Department and Johannesburg Water have very generously provided the TT construction standards that they have developed over the past few years as an input into the compilation of national standards. A meeting was held on 19 November last year between representatives of WRC, Agrément and Technikon Pretoria to discuss the stages of developing these standards from SASTT to SA National Standards (SANS) and how this process will be implemented and funded.

This project has been discussed with the appropriate representative of SANS (standards producing arm of SABS) to ensure that the correct approach is taken. Wherever possible international standards will be adopted. SANS has arrangements with several international standards organizations that enable it to use their standards directly or to use them as a basis of producing new standards.

A request is made to members, especially those who have international contacts, to provide any documentation or comments that could be used in compiling a set of TT standards that are appropriate for SA conditions.

**NO-DIG Live SA** There are more opportunities for TT than ever before in South Africa, but the potential user needs to know what is available and can be offered. There is no better way of doing this than showing and telling the user what can be done. A 'NO-DIG' show is planned for later this year. Craig Burnie and Sagee Moodley will be arranging this.

Any members who have ideas or comments should please make contact with them (numbers are given below).

**PIPE RAMMING - A VIABLE TECHNIQUE?**

“...Ground is too hard...”  
 “...Too rocky...”  
 “...Not accurate...”  
 “...Can’t clean out the pipe...”

These objections and many more are regularly raised by contractors and engineers alike, yet how many of those raising these objections have planned, prepared and carried out a good ramming job following all the guidelines? Using the correct schedule steel pipe, taking into account the diameter and ramming closed or open-ended? Used a suitable soil shoe and the correct lubrication set-up – or indeed the correct lubricant (i.e. a polymer for clay or shale instead of a bentonite)?

As for clean-out – there are any number of solutions depending on the particular site and conditions. If sealing correctly and using high pressure air and water doesn’t work, then how about high pressure water to wash it out or using a fabricated pipe shovel, or even simply digging it out of large-diameter pipes?

Essentially, ramming – utilizing pneumatic moles seated in collets to ram a steel casing - is an excellent, cost-effective alternative for installing steel casings under roads, railroads, finished landscapes and structures. Compared to conventional methods, ramming saves on set-up time and offers economical new infrastructure with lower maintenance costs.

Pipe ramming is the preferred method in many parts of the world in adverse conditions such as free flowing sands and wet conditions where other

**The current Board members, their portfolios and contact details are detailed below.**

NAME	PORTFOLIO	LAND LINE	CELL	E-MAIL
Alaster Goyns (President)	Newsletter	012 644 0043	083 255 7266	mcegg@pix.co.za
Glen Derman (Vice President)	Seminars	012 653 5904	082 371 6181	gderman@sightlines.co.za
Paul le Roux (Past President)	R & D	011 236 3446	083 303 4927	paill@gmks.co.za
Craig Burnie	Site visits	011 452 1838	083 447 6563	cnburn@mweb.co.za
Sagee Moodley	Membership	011 643 3038	083 488 8833	trenchle@icon.co.za
Paul Tuson	Media liaison	011 452 0758	082 557 1993	ptuson@radiodetection.co.za
Joop van Wamelen	Web page	012 841 4034		jvwamele@csir.co.za
Johann Wessels	Standards	012 308 8033	082 355 9588	johannw@tshwane.co.za
Ronel Derman (Secretariat)	Administration	012 653 5904	082 440 0791	rderman@sightlines.co.za

Please remember to pass the SASTT dedicated telephone number, viz 086 010 3256 onto anyone who is interested in or has any queries about Trenchless Technology and you are not in a position to assist.

**NO-DIG 2004** This year's event will be in Hamburg during November. It is planned that at least one of the elected board members will attend and deliver a paper on condition assessment.

methods risk leaving voids. It has also performed well in hard cobble conditions, gravel, soft limestone, glacial till and shale. It is normally used in non-grade-sensitive applications, but where controlled grade is critical, experienced operators have used it where allowable variation in the job requirements, ground conditions and the length of the ram are conducive to the method. Two recent projects bear testimony to the capabilities of this technique when correctly applied.

In Caracas, Venezuela, an existing 2m drainage culvert under the runway of a military airbase had to be expanded to two side-by-side 2.5m by 1.8m culverts. Utilising a 400 mm and a 600 mm Hammerhead Mole, twenty-six steel casings were rammed over a distance of 60m each, 16 of them arranged horizontally. They were linked using interlocking channels down their sides, to form the roofs of the new culverts. The other ten were arranged vertically. The diameter of the pipes was 600 mm.

Towards the end of 2003, Gonzales Boring and Tunneling completed a 106m ram of 106 cm diameter steel casing in Seattle, Washington, using a 600 mm Hammerhead Mole. While this is certainly not the largest ramming job completed, what made it all the more impressive was that it was accomplished in extremely heavy cobble conditions (nearly 90%) with some of the boulders as large as 1.5m diameter, and with a water table at only 1.5m depth. Working two 10-hour shifts and averaging 12m per day, the job was completed in 9 days.

By Craig Burnie, Wirtgen South Africa (Pty) Ltd

Regards to you all,  
 Alaster Goyns