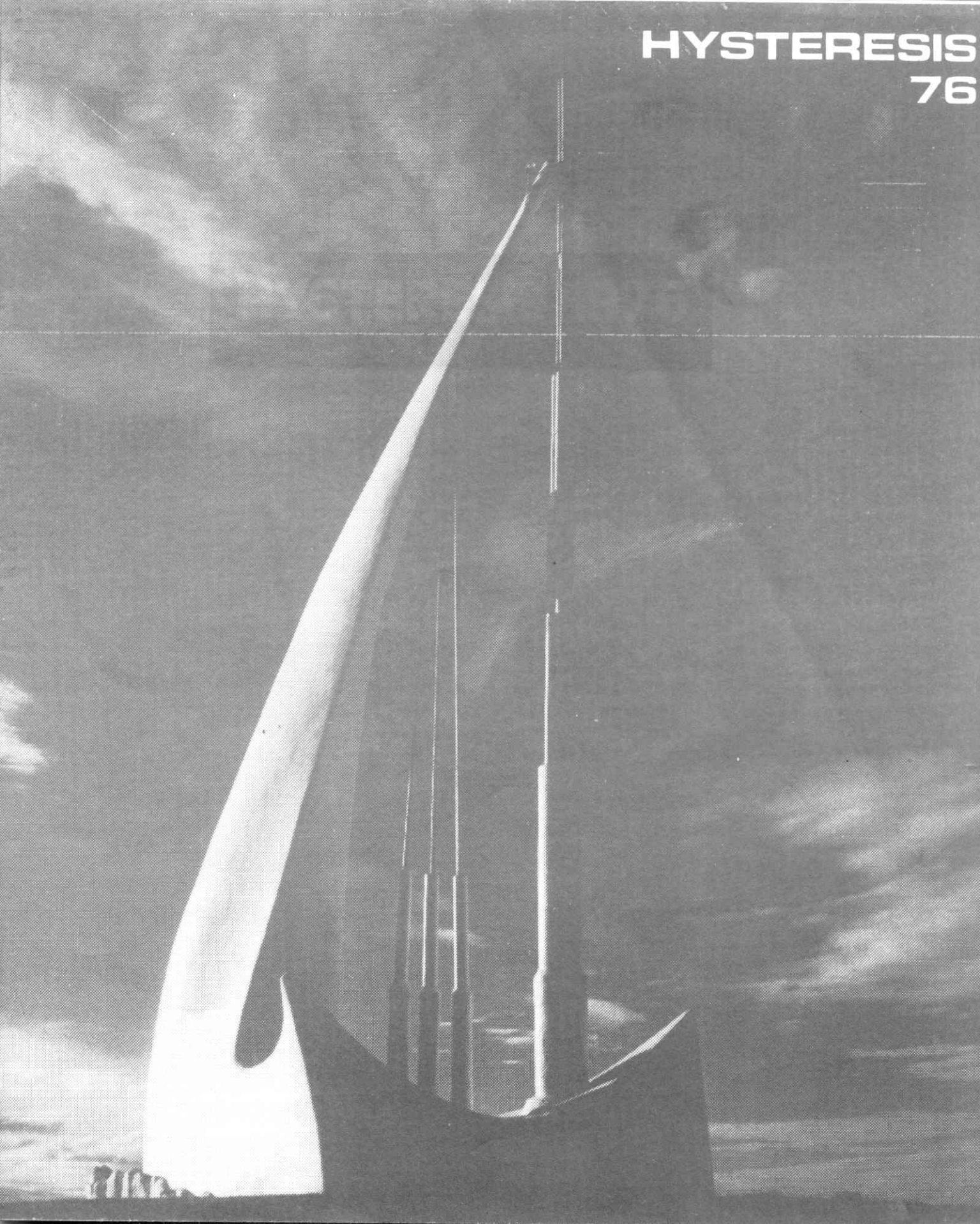


HYSTERESIS 76



RIBBY

HYSTERESIS 1976

Public Buildings Department

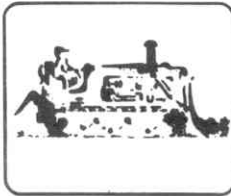


Engineering at Work in South Australia...

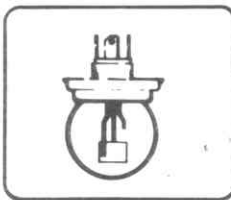
The Public Buildings Department is responsible for the provision of buildings for the use of the people of South Australia.

Members of the Department are involved in projects ranging in size from the new Flinders Medical Centre to minor repair work in outback schools.

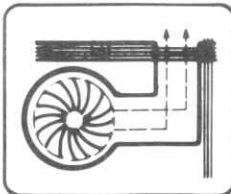
The design work of the Department is performed by autonomous architectural and engineering offices, who together with the maintenance and construction divisions administer an annual budget of \$150,000,000.



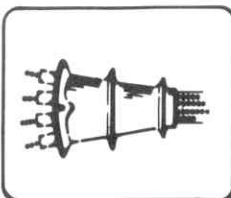
CIVIL ENGINEERING is concerned with the exterior environment of buildings including siteworks and landscape planning. The importance the Department places on the quality of life means that no building can be seen in isolation; the Civil office ensures the compatibility of a building and its environment.



ELECTRICAL ENGINEERING is responsible for the design of electrical and electronic services within public buildings. As well as the usual power and lighting systems in buildings, the Electrical office is involved in providing lifts, communication systems, power generators and a wide range of special equipment required by hospitals and other government departments.



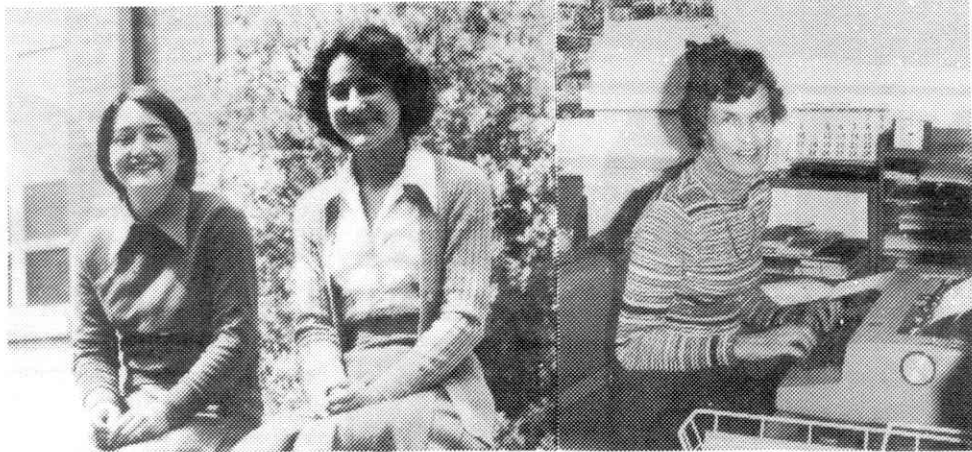
MECHANICAL ENGINEERING is responsible for the economical application of engineering science to the provision of air conditioning, refrigeration, ventilation, fluid reticulation, steam, hot water and on site power generation systems. Also a wide range of specialised services such as food refrigeration, noise attenuation, instrumentation, controls and other ancillary services associated with the building industry.



STRUCTURES office is responsible for the design and construction supervision of engineering structures, covering the complete range of public buildings within South Australia. The design philosophy of the group ensures the optimum utilisation of computers and modern construction methods. For example, the office has played a leading role in the use of post tensioning in concrete floor systems.

inside

EDITORIAL.....	5
SOCIETY REPORT.....	6
SOCIETY ACTIVITIES.....	9
SUPER SCOOP.....	16
ANESA.....	18
BULL.....	20
CIVILS.....	22
ELECS.....	27
CHEMS.....	30
MECHS.....	33

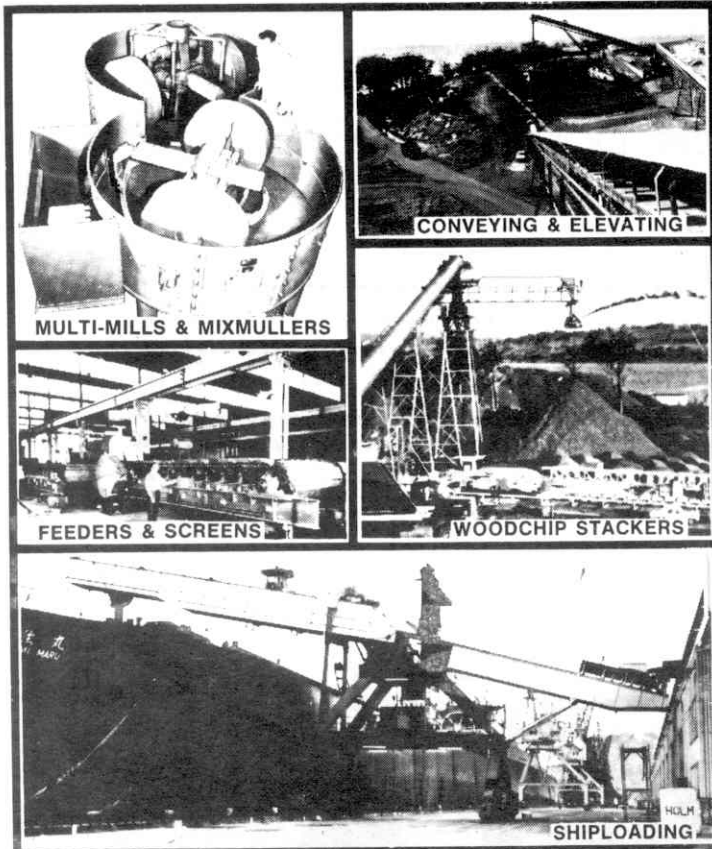


Our thanks to Mrs Stock, Rosanna, Kerry, Sue and Gerald de Vries for their willing assistance to the society. Thanks also to Salvo and Greg for help with the paste-up.

Published by the Adelaide University Engineering Society, c/- Civil Engineering Secretary, University of Adelaide,
Printed by the S.A.U.A.

We thank General Motors-Holden's Pty. Ltd. for their generous financial assistance.

Cover: "The Singing Ship", Queensland
Photo by Robert Marcussen



Big in MATERIALS HANDLING

MALCO INDUSTRIES LIMITED Engineering Division

BIG in Materials Handling and processing equipment . . . BIG in understanding and executing projects through to profitable operation . . . BIG enough all-Australian company to represent top names in United Kingdom, Canadian and American Materials Handling.

Names like . . . W. H. BAXTER LIMITED, U.K.; BRUNETTE MACHINE WORKS LIMITED, Canada; AERO-MOTIVE from Michigan, U.S.A.; AKRON STANDARD, Division of EAGLE-PICHER INDUSTRIES INC., Ohio, U.S.A.; VIBRANETICS INC., Louisville, Ky. and FMC CORPORATION (Link - Belt) of Illinois, U.S.A.; THE NATIONAL ENGINEERING COMPANY, Illinois, U.S.A. and CARTHAGE MACHINE CO. INC., N. York, U.S.A.

MALCO INDUSTRIES LIMITED ENGINEERING DIVISION

AUSTRALIA, N.Z., SOUTH EAST ASIA



FROM DESIGN TO OPERATION

MALCO's engineers will mastermind your total project from its original conception through to operation. Experienced since 1919, Malco engineers are fully equipped to design and manufacture materials handling products in these and many other areas:

Bulk handling, coal, concentrates, forest products, grain, iron ore, salt and environmental engineering.

MALCO is a supplier and manufacturer to the ceramics, chemical, food, foundry and rubber industries throughout Australasia and overseas, from basic planning to full operation.

MI

S.A.: 121 Regency Road, Croydon Park, S.A. 5008
Telex: AA 82066. **Telephone:** 46 5401
N.S.W.: Victoria Rd. & Rich St., Marrickville, N.S.W. 2204
Telex: AA 20471. **Telephone:** 560 8144
VIC.: 102 Canterbury Road, Canterbury, Vic. 3126
Telex: AA 32176. **Telephone:** 83 9453
W.A.: 49 Hay Street, Subiaco, W.A. 6008
Telex: AA 93374. **Telephone:** 81 8785
QLD.: 244 St. Paul's Terrace, Fortitude Valley, Qld 4006
Telephone: 52 8293
TAS.: Webster Pty. Ltd.

Runnin' like you're runnin' out of time
Take it all;
Take it easy,
'Til its over.

Understandin.....
When you're headin' for the border
Lord, you're bound to cross the line.

Don't get excited, as long as you work towards some goal you'll eventually achieve it, sings Kris Kristofferson in "Border Lord". But is it sufficient to head blindly in one direction at any pace, with no examination of motives, with no appreciation of the consequences, without full understanding of the alternatives?

Either as a result of the current economic situation and lack of employment opportunities, or in spite of it, there appears to have been a quiet stagnation of concern on campus for the values of life and our chosen careers. True, there are fewer moral issues of the same urgency as the Moratorium Campaign, but even the uranium, abortion and TEAS questions have generated little activity. Perhaps the depths of decadence occurred in the recent S.A.U.A. elections when students were coaxed to the ballot box by the promise of free icecream for all voters.

The Engineering Faculty certainly has its share of inactivists. Philosophy is confined predominantly to design projects, and even there the main consideration is not "What is the best solution?" but rather "What do the markers consider to be the best solution. Study of the Humanities and Social Sciences is universally scorned and the political "heavy" is treated with greater contempt than a practising homosexual. Are these attitudes prerequisite for the engineering courses or are they a result.

Engineering, in the process of manipulating, complementing or altering man's environment relates to society as much as any other discipline or profession. We are told every year that we are to enter society as professionals. However it could be true to say that although environmental and aesthetic factors are slowly finding their way into the course work, we, the students, lack the motivation and the initiative to grasp the nettle and take a truly professional interest in the results of our work.

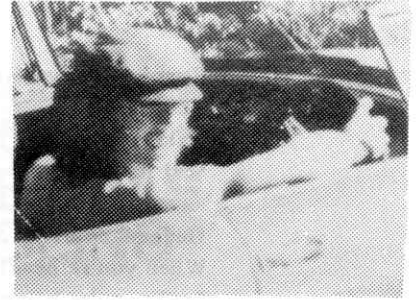
Will we as "engineers" become the bumboys of the politicians and social planners? Or will we become the part of the team which guides society towards the future - a profession in our own right, understanding and communicating with the rest of the world and the other professions?

The Challenge is yours!

Peter Miller
Rex Gibbs

Ed it or
Co-Editor

Ramblings of a President



1976 was in general a successful year for the Adelaide University Engineering Society from both the social and financial point of view.

We saw the introduction of a new event, 'The Torrens Regatta'. This was a challenge to the Law Society who fared very poorly. It is hoped that this event will be repeated next year. I would like to thank the Adelaide City Council who retrieved a large quantity of rotten fruit, vegetables and assorted missiles from the naturally putrid River Torrens. I also thank the owner of twelve disgustingly dirty paddle boats, and the gallant captain of "H.M.S. Pop-eye" who in the face of adversity told a large group of umbrella waving old dears where to get off

The car trial was a success for those who went. We must thank Mr. Betros who checked out the race track before the event and performed an impact test on the road base and embankment.

The ball was again a good show for those who could be bothered to go. A great deal of work was put into the show by many people and it was very difficult to provide a show offering as much as this, for the price, without going bankrupt. In fact, we went into large debt at various stages but Treasurer Jenkins managed to transfer the debts from one source to another and save us from embarrassment and bankruptcy. I would like to extend my sympathy to John Barrow who, having won the "most compatible couple" award for the evening, felt compelled to return his most expensive prize, a Fonzie Poster, when he and his girl split up a week later.

This effort was later bettered by Tony Vovos who unfortunately had a stability failure in his cortina. I warned him about driving in a cross wind before the event. It was presumed that the lone motor cycle entrant must have fallen over on a dirt road whilst reading his directions.

The dinner was a very smooth show with a good attendance of Mechs. and Civils. The Elecs. however, not being so socially graced, managed only to field a team of five 'Civilized electrical engineers. We must congratulate these five on executing such a tastefully disruptive influence on the proceedings until Mrs. Luxton confiscated their equipment which she used even more effectively than the Elecs throughout the evening.

After the dinner Mr. Failure Dyer continued to amuse the crowd by showing us how to hold a beer glass whilst going to the toilet. This resolved in five stitches (Yes, stitches were in his hand).

I would like to sincerely thank Mr. Culver on behalf of Peter Miller and myself for his invaluable assistance in planning the dinner and for his very sporting "impromptu" speech at the dinner. Thanks also to Rob Urlwin for his control and eloquence as Master of ceremonies throughout the evening.

The football carnival was a great show thanks entirely to Peter Salvesson. However, there were a few unfortunate incidents such as:

- 1) The oval was double booked
- 2) A second year civil broke his leg when he kicked a goal post.
- 3) A few football jumpers on loan to Peter got lost!?

It was pleasing to see such a large turn up at the Annual General Meeting, which proves one of two things:-

- 1) There is a very strong support for the Engineering Society.
- 2) There is a very strong support for Andy 'Bakonyis' blue movies.

Thanks Andy, you win!

The news sheet Cyclops has been published regularly and has maintained a high standard throughout the year due to the efforts of Steve Polglase and various contributors. It requires a lot of time spent in writing, and printing to produce such a load of material.

We must also thank the Secretaries Mrs. Stock, Rosanna and Kerry for their assistance in typing and printing throughout the year.

To sum up then, the score for the year stands at.

- 1 Rolled Torana
 - 1 Rolled Cortina
 - 1 Motor bike
 - 1 Failure Hand
 - 1 2nd Year Civil's leg.
- and numerous sundry damages.

I would like to thank Peter Miller, Rob Jenkins and Josephine Flint and all those who made this possible and made my job very much easier throughout the year

Steve
Johnson.

thy yearly bread ...

Financial Report For A.U.E.S by R.D. Jenkins (Treasurer)

1/3/76 to 30/9/76

Balance Sheet as at 30/9/76

ASSETS

Cash at Bank	446.84
A/c Receivable	<u>50.00</u>
	496.84

LIABILITIES

A/c Payable	80.88
Members Balance	<u>415.96</u>
	496.84

ITEM	FUNDS STATEMENT		INCOME STATEMENT	
	RECEIPTS	PAYMENTS	PROFIT	LOSS
Opening Balance	115.34		-	-
Coca Cola	334.20	304.13	30.07	
Ball	1204.00	1142.10	61.90	
Dinner	1057.50	1030.15	27.35	
Other Functions	278.00	244.54	33.46	
Cyclops & Hysteresis	170.25	67.45	102.80	
Sundries	45.04	-	45.04	
Closing Balance	-	446.84	-	
Sub Totals.	3204.33	3235.21	300.62	-
A/c Payable	80.88	-		
A/c Receivable	-	50.00		
TOTAL	3285.21	3285.21	300.62	NET PROFIT

RECONCILIATION OF BANK BALANCES

Opening Balance	115.34
Plus Profit	300.62
Funds at Closing	<u>415.96</u>

Closing Balance	446.84
Plus A/c Receivable	<u>50.00</u>
	496.84
Less A/c Payable	<u>80.88</u>
	415.96

A.U.E.S. COMMITTEE



A.U.E.S. COMMITTEE

Greg Betros, Peter Salveson, Bob
Jenkins, Steve Johnson, Josephine
Flint, Steve Polglase, Peter Drabsch,
Bob Harrison, Rob Clarke, Andy
Bakony, Ed Knochs, Neville
Reichman, Peter Miller, Rob
Urlwin, Dave Bevan.
Absent: Rex Gibbs, Steve Healy,
Dick Pagliaro.

Fresher's welcome

The fresher's welcome for 1976 was held in the Chapman Lecture Theatre on the Thursday night of Orientation Week. About eighty freshers attended, with a number of staff from each department.

The acting president of the society, Greg Betros, gave a rousing speech of welcome, and left no doubt in the minds of those present that, despite the efforts of some of our friends, the Engineering course is not quite all work and no play. Prof. Bogner (elec.), Prof. Miller (chem), Dr. Bull (Mech) and Prof. Cheung (civil) then gave short speeches after which I am sure every fresher was inspired and enthused about the prospects that lay ahead



After the showing of a home-made film, the details of which I will not disclose, the gathering retired to the Chapman Laboratories, where refreshments were to be served. However, disaster struck - a flat gas bottle for the keg! The elders of the profession, determined not to let the freshers witness an engineering failure, displayed incredible wit, ingenuity (enginuity?) and application, and the beer was soon behaving according to Bernoulli's principle (as all beer should), so all was well, and an enjoyable evening was had by all.

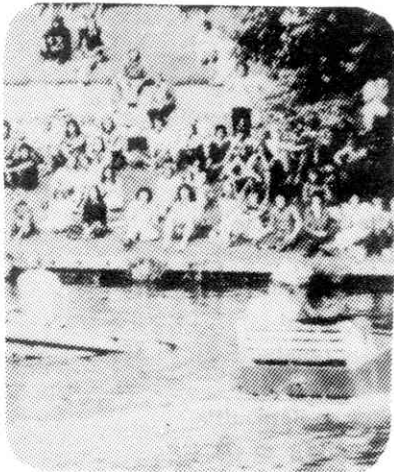
jo flint

REGATTA

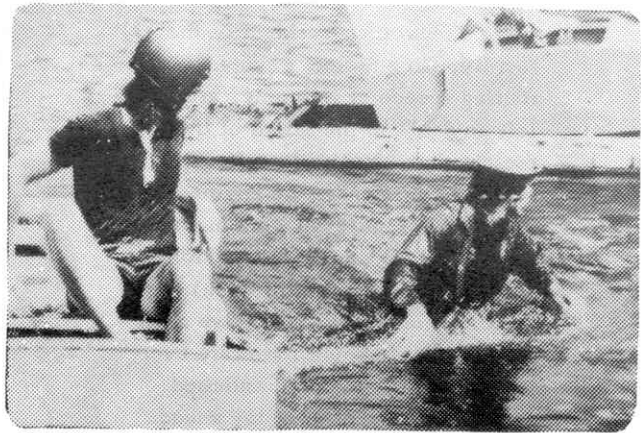
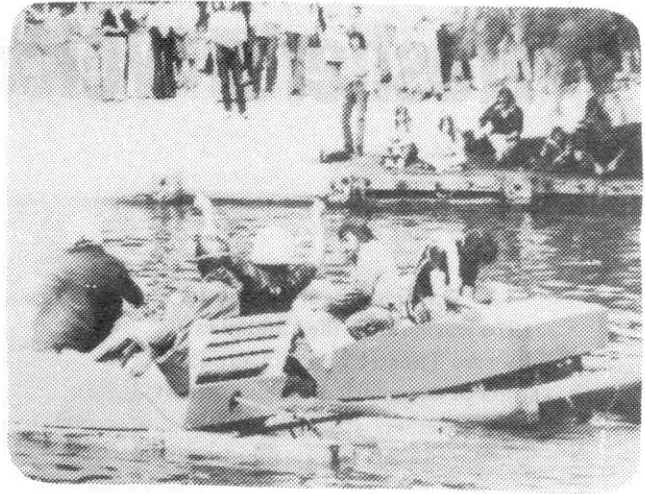
It was with some trepidation that we slunk down to the tidy green banks of the Torrens at or about lunchtime, April 22nd. Water had never looked so wet, and of such dubious bouancy.

Suspecting that togetherness might not be overly prevalent amongst engees, and that the Society's image could do with a little "push", it had been decided to wage some sort of interfaculty competition. Result: one regatta, (paddle boat), C.O.D. Our adversary: Law (someone we could beat, naturally).

By 1.15, an inspired crowd of plebs had coagulated on the footbridge eagerly awaiting the promised spectacle. Amongst the confusion, the race was accidentally started on time.



As the 22 competitors sprinted from the starting line to their craft, starter Rob Urlwin gave us a blinding display of gunmanship. Confusion arose once again, when several boatsmen found their craft securely moored to the bank.



Two lawyers got off to a brilliant lead. However, as they approached the footbridge, which proceeded to divest itself of a considerable quantity of East End Market produce, this position rapidly became very uncomfortable.

From this fracas, I recall...

- 1) Roger Flint riding shotgun for Zenon
- 2) Two female lawyers, complete with shower caps and L plates.
- 3) Smithy's "swim"
- 4) Two unusual lifesavers.
- 5) About five people, violently NOT throwing Greg in the river.
- 6) Pagliaro showering everybody.
- 7) A very slow push back to the city bridge
- 8) Doug's musical adaption of the mega phone.

In the ensuing chaos, one paddle-boat was overturned, and reliable old Popeye was seen to abort its voyage. Amazing initiative was displayed by a group of third year civils, who attempted to overturn boats with a length of rope suspended from the footbridge - a refreshing change from the boring routine of throwing flour and fruit although admittedly the box of onions was an innovation.

Needless to say, we won (no holds barred as they say), and Digger Hackett and Failure were presented with a priceless engraved toilet seat (complete with lid). I think the law team were presented with a crate of Chateau le Gopener, as a final vindictive gesture. They really deserved something better for the fight they put up.

ROLL ME OVER

BY PETE SALVESON

This year's car trial was held on Sunday, 11th April with a good line up of approximately 40 cars leaving from the corner of Greenhill Road and Glen Osmond Road. The cars were in the hands of the "capable" starters between 10.30 a.m. and 11.15 a.m. As the event took the form of an Observation trial (the winner correctly guessing the most number of observations) the organisers picked a very scenic route behind Stirling, Kuitpo forest and finally ending at the Kangarilla Oval where Beer, music and B.B.Q. were laid on.

Although everyone who decided to take part in this year's event had a good time, it was not without its problems. The organisers (?!?) had no experience in setting out such an event and I'm sure after this that they won't set out another. They procured two maps and began a liesurely Sunday drive in an untold horny M.G. setting out the course at the same time.

Since it was their first time they decided that they had better check the course the next weekend. It was rumoured that all the next weekend the sounds of "Jesus, Salvo, where the f... are we!" rang through Stirling. Seems as though someone can't tell their left from their right (we won't mention names).

This however was only the start of the problems. Since the course was completely rerouted, an independant crew was called in to check it out. Besides getting lost in the first 10 minutes (still confuse left from right) the driver unfortunately rolled his car. We won't mention names.

This of course brought panic to the committee who wanted to correct the event. However it was decided that the event should take place.

Everyone was jubilant when last year's final year civils (i.e. Muzz, Strop Stevens et. al) rolled up in a portable toilet (actually it was a land rover which was used for delivering and installing portable toilets) I would never had thought you could get 12 people into a toilet. Ah well. Other notables at the line up were Zenon Kinal (alias Allan Moffat) in his rotated rotary (which was thought to have broken the sound barrier at one stage during the event) as well as several first years.

Well while the organisers were setting up and making sure that the beer was safe to drink, another car rolled and one bloke wrote himself off on his motor-bike. Everyone (well nearly) made it to Kangarilla Oval and devoured the keg in no uncertain manner.



FINAL PLACINGS

WINNER:

Craign Curtis and Bazza Morgan

RUNNER UP:

G. Pitman

MOST DESCRIPTIVE:

M. O'Reilly

MOST GRUBBY ENTRY:

Dick Pagliaro and Steve Healy

GOOD SAMARITAN AWARD:

Steve Polglase and Joy O'Hazy

The Ball in 1976 moved back through two and a half decades. The theme was - Happy Days and the whole University knew about it. Hart, Drabsch and Gibbs were nearly hung, drawn and quartered by several Arts and Drama Heavies for covering up their beloved posters with the Fonz and worse still were subjected to an angry tirade in On Dit.

The sounds of a Norton Commando echoed through Lecture Theatres - round the campus. Brylcream and Ducktail hairstyles were in! Cigarettes were rolled into T-shirt sleeves and we even had a real live Teddy Boy. The Final Year Room looked like a fifties milkbar.

aues
presents the

happy days
ball

DATE: SAT. 12. 11. 76
TIME: 8.00pm - 11.00pm
PLACE: LECTURE THEATRE
TICKETS: £1.00
CHILDREN: 50p
STUDENTS: 75p
DOORS: 10.00

rock-n-roll by jeremiah

Just to give the evening that authentic touch the Management laid on some REAL greaser's who spent most of the night throwing beer on the floor. They couldn't hold it so what else were they to do with it?

The supper was in keeping with the general Happy Days atmosphere with a multitude of Hamburgers, which made lovely footballs.

The awards were better - J.B. and his lovely lady got most compatible couple award (J.B. paid for it himself). Rumour has it that J.B. and his lady lasted out the week before they broke up. The Elecs were up to their usual tricks - Andy's tie lit up whenever he was touched in a certain place and Peter Tymukas could not be out-smoothed.



The night was even better in spite of the shortage of first and second years. All Da Boys were there smooth as ever. Brylcream everywhere. Jeremiah were rehearsing "Happy Days" backstage for the first time ever and soon everyone was jiving except the guys on the bar who tried to finish a ten of cider all by themselves.

couth and discrimination

Undaunted by the fact that the Hotel Australia did not invite us back for dinner this year, we decided that all was not lost and set off in search of nearer and greener pastures. - And what better place for this mighty munch-in than the Marion Hotel.

It was a little disappointing for the organizers (and very disappointing for the hotel), that numbers did not come up to expectations but this was in keeping with the general lack of support for our shows this year. We can only hope that word gets around to the troglodites that made a point of not coming along, just how good these shows were and that the books really don't mind if you give them a spell occasionally and have a good time. Anyway, enough of the apathy article and on with the dinner

Having dragged the tails out of mothballs and gathered the little woman up, the Marion Hotel was in sight. And what a sight! Set among spacious carparks in the midst of the southwestern suburbs drainage scheme, the neon lights showed us we were there. Waiting expectantly at the door and wondering just whether he should have been welcoming people or not, stood the president, three quarter grin seemingly perpetually stuck under his nose. A quick sherry or two (top ho!) or was it three and the show's on the road

The crowd was stunned for a start, what with a genuine looking M.C. (or was that ring master) proposing a loyal toast, but nothing a solid "Up the Queen" could overcome. A veritable battle was now raging. What with trying to finish your first course before the plates were whisked away and replaced by the next and trying to



drink your fill before the free grog ran out. God - it was hell! But we managed. Incidentally the grub was quite good, but I got the distinct impression the waitress was in one hell of a hurry to get home. It was not long before everyone was sitting back contentedly burping and amongst the footy whistles and horns(?) a veritable barrage of after dinner speakers could be heard.

Taffy Farrant let us in on a few things that happened in the dark ages and made a lecturer or two blush with a remembrance that just slipped out? (Whoops!) and then Dr. Bull told us how not to get caught with our pants down. To show another method of not getting caught with your pants down, Peter Michael Ray Alistair McTugg Wojciechowski spoke without his pants on. But he didn't get out of kilter! (chuckle)

The guest speaker for the dinner was Professor Geoff Harcourt who was to speak on "Everything you always wanted to know about what a social scientist thinks of engineers but were too afraid to ask!" It would seem that the sight of so many surrounding engineers changed his thoughts because he hardly slammed us at all. He did however keep the laughter rolling and let the cat out of the bag as well, for as it turned out he was the curtain-raiser to a spontaneous request for Bob Culver

After poignant procrastination and calling us all bastards, seeming especially myself, Bob gave us a gem

Added amusement was given by a brawl between the committee and the manager when the bar was shut and the fact that the ladies dyke became the men's also when the mens inexplicably ceased to perform the required function. Prof. Luxton's car also mysteriously moved itself into an embarrassing position from which it had to be removed amidst the grateful platitudes of Mrs. Luxton.

And thus the dinner came to an end with those that went loving it and those that didn't, missing it. - Suffer!

Rob Urlwin

FOOTY CARNIVAL

Prompt arrival at the Camden Oval at the nominated time (10.30 no less!) should have left me with some doubts about the reliability of my hitherto trusty informants. Play had already started!

However, the first thought to cross my mind was "They're too short for engineers" (apologies to all short engineers). My second thought was "Besides, they seem to know what they're doing" (apologies to all engineers, large or small). On consulting a few of the organisers I learnt that they were not a team of midget ring ins, but were in fact the South Cubs. Who knows what they were doing there - the organisers certainly didn't

The first match got under way at 11.30. The weather was fine, with a four goal breeze favouring the northern end, the pitch was firm, and the beer was free. The Civil III team pulled no punches and went away to a fighting victory over the combined Mech III & IV team.

The highlight of the day occurred a mere five minutes into the second match. Disappointed at the lack of solid opposition from the second year mechs, an aspiring second year civil, Rob Aitken, launched a magnificent, no-holds-barred, kick-it-in-the-guts offensive at a menacing goal-post, which had been lurking insidiously in the region of the forward pocket

His effort certainly deserves merit, not only for promoting spectator interest, but for swelling the crowd by two (count them!) ambulance men, and several police. Needless to say, the inspired civils went on to win. The third match,



last of the minor round, was between the Civil IV all star team and a combined Chem. team. The Chems kicked with the wind in the first half and managed to hold the Civils to a low score. However, in the second half the Civils would be restrained no longer and went away to win by a comfortable margin.

An unprecedented innovation this year was the Polglase Intra-faculty Memorial Animal Act. Burns and Kinal, primed contenders for the belching pentathlon, amused some of the crowd with superb control of their epiglotti. However, the most amusing incident was when some guy tried to shirtfront GOD, of all people.

The first semi was another win for the Civil III's eliminating the now depleted Civil II side.

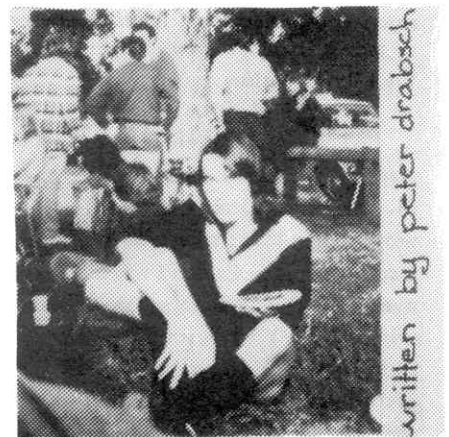
The second semi saw the Civil IV all-star team playing the Mech II team (having been given another chance). Needless to say, the Civils went on to win this match, having been pre-match favourites with some of the more rash punters.

The grand final was set to be the match of the day, with the Civil IV all-stars taking on the Civil III team. Tension was high all round the oval, as spectators jostled for position. Meanwhile, the Civil IVs took a break for lunch, and the Civil IIIs could be seen in the vicinity of the keg.

Eventually the match began, and soon became a tough, hard hitting game of football. Scores were close throughout, but the Civil IIIs went on to win by a point after extra time. (No doubt many of the frantic attempts to score were due to the two nubile young goal umpires).

However, the Civil IV all stars, under the auspices of ace coach G. Rix, were certainly not disgraced. General opinion was that they had actually won, and the scorers couldn't count without their HP45s.

Without doubt, the carnival was a terrific success. This was primarily due to Salvo's smooth organization, and the support received from players and spectators. Thanks go to Peter Salveson (the best tapped keg yet), the umpires (Peter and friend), St. Johns., and all the commentators.



CYCLOPS

Steve Polglase

Variously spelt. . . .

Cyclopps	Syclops	Cycle-ops
Ciclops	Siklops	Sicle-ops
Siclops	Psychlops	Sigh clops
Cyklops	Ciklops	Shy-iic-cloppsh

... depending on your colour, what side of the bed you got up this morning your hangover index, how many times you brushed your teeth after lunch, how long it rained for in Cobdogla on July 15th, 1923, whether your girlfriend's surname has "a" as the third letter, and whether you can spell or not!

Yes, this year, Cyclops has been of much higher standard. Over the past few years, the official AVES has been becoming grubbier, not to mention untidy and illegible. To remedy this situation, an editor was appointed (viz me) to "produce good quality smut at regular intervals".

Accordingly, we have brought engineering students REGULARITY (every fortnight, subject to reasonable unilateral tolerances), ORIGINALITY (nothing but quality of course), and many new JOKES (Irish, Spegarian, etc).

Every distribution day, our ancient halls of learning have rung to the chuckles, laughs and guffaws of delighted little engees as they make their way to lectures, clutching the aforesaid publication in their hot, gobby paws. Also this year, flying in the face of tradition, we initiated the practice of printing Cyclops on variously coloured paper, - predominantly green, but with a smattering of yellow, blue and the traditional white.



Included in Cyclops this year have been reports on all AVES functions - Regatta, Footy Carnival, Car Trial, Ball and Dinner. Irish jokes appeared in copious quantities, many good ones and a few of debatable merit, while quotes and enthralling stories also found their place. Unfortunately, development of the "bullshit filter" in the elec. department prevented many people from extracting the full benefit from these revelations. Highlights were three (count them!) cartoons, and volumes I, II, & III of the Grobian Report.

The editor (of cyclops) thanks all those who contributed articles, stories and (most important of all) jokes. Also, thanks to our typists - Sue, Anthea, Jenny and Mrs. Jenkins. Due to this unprecedented support and cooperation, we managed to produce a record eleven issues this year.

FROM THE BEST OF CYCLOPS :

"An engineer can do for \$1000 what any fool can do for \$1000".
(DAC, Vol. II)

"Pregnant Irish girl arrested by customs officer for dope smuggling"
(Vol II)

"I've got one, but I like to use my fingers"
(Pres., Vol III)

"Logarithm - contraceptive method practised by Canadian lumberjacks"
(James, VOL. IV)

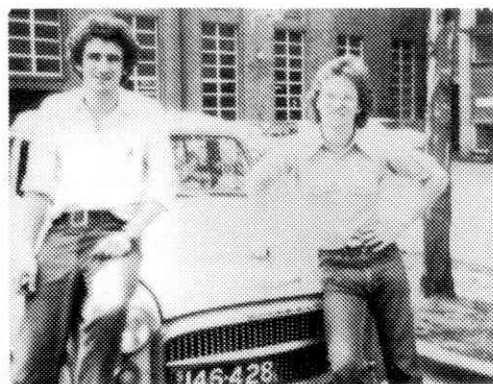
"If an inverted choc. milkshake was to be spread out until it formed a layer barely one molecule thick, it would look pretty much like the southeast corner of the refec, most lunchtimes"
(Grobian, Vo. V)



THE FLYING GRANDSTAND

SUPER SCOOP

ROAD TEST



Hysteresis has beaten Peter Wherrett to the most prized road test of the year. Their exclusive report looks at the infamous 1954 Car of the Year - The Hillman Minx.

Passed on for generations this unique vehicle finally found its way into the hands of Mr. G.E. Rix, who in the past 5 years, has fastidiously maintained this fine example of 50's nostalgia. After much haggling he finally agreed to allow a full road test, but stressed that this was no car for the novice.

First impression of the Mighty Minx was that of sheer power. We settled low into the individually contoured bench seat, and after a series of smooth column changes, powered out into the morning traffic. We glided peacefully through suburban Adelaide and out onto the open road.

While touring, an ample view of the surrounding country side is obtained by back seat passengers, who must have some expertise in climbing to reach their seats. Staff photographer Andy McPharlin stated "The view from the back seat of the 'Flying Grandstand' can only be likened to that obtained while watching a Test Match from the top of the John Creswell Stand at Adelaide Oval".

Notable points are the modifications which have been carried out by the present owner. The neat chick-catching change of styling by the conversion to a 2 door coupe is unique. The important distinction between a normal coupe and the "Grandstand" is the fact that on the latter both doors are on the driver's side, thus allowing the "helping hand" approach when on the con.

The other modification has been the changing to a large, side-exhaust (1 3/8" dia.) which emerges under the right hand passenger's door. While driving the owner can now listen with ease to the finely tuned note crackling from the competition orientated mill.

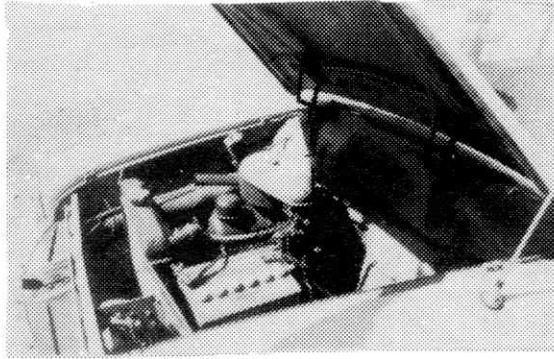
Styling is distinctly modern with panels covering all necessary parts. On the test car the body was finished in the usual "noshow - no shine" autumn brown. Added extras including trim and hubcaps helped give the model that speed image so well illustrated by the incredible performance figures.

Forced-flow air conditioning has been fitted and is easily operated by lifting the front carpets. The plush

leather upholstery is complemented by the addition of a real car-radio that, quoting Mr. Rix, "Doubles the market value of the vehicle".

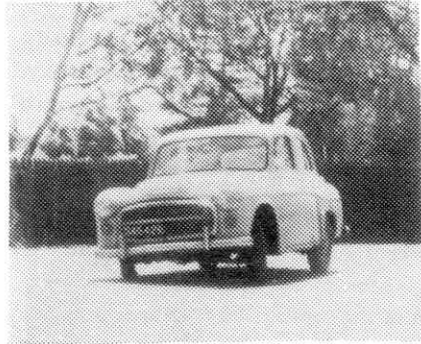
On reaching the track, serious testing began and we found the soft compound rear slicks really helped traction on full-bore starts. Acceleration was shattering with the equipment being unable to measure the times to a sufficient degree of accuracy. After completing several crash stops it was decided the already capable braking ability of this classic was considerably aided, especially in the case of dangerous situations, by the liberal pumping of the stop pedal and by opening the driver's door. The Minx took all corners in its stride and the only indication of protest was the gentle creaking of the front end. Ride was smooth on dead flat roads with the ever present, sleepy oscillations so helpful for driving home late at night.

When placed next to other vehicles of class it is hard to find superlatives to describe this car. Its major attributes are proven performance (22 years), striking appearance and no nonsense reliability. All in all, a valuable asset and a worthy addition to the Sims Metal, Motor Vehicle Hall of Fame.



THE BIG DONK

ENGINE... 4 cylinder - 1400 cc
 POWER . . . N.A. . . but considerable
 TRANSMISSION. . . 4 speed and wheels
 STEERING... mostly automatic.
 follows contours of road.



CORNERING AT SPEED!

PERFORMANCE

Speed

0.10 m.p.h.
 0.70 m.p.h.
 0.60 m.p.h

Time

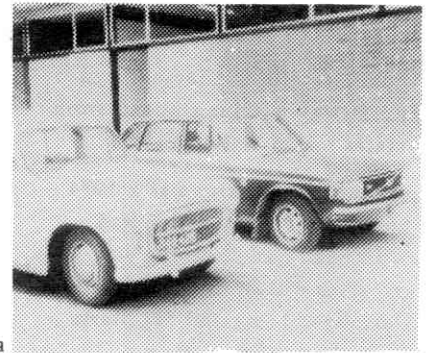
5 sec.
 15 sec.
 N.A. (ran out
 of road)

TOP SPEED

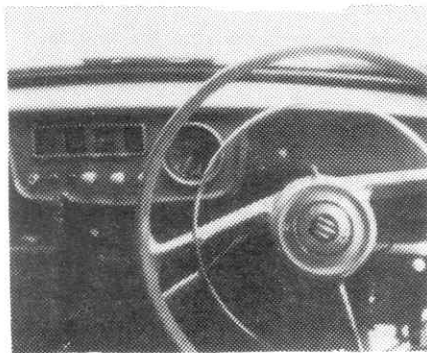
Can be wound off the clock, has been known to reach 70 m.p.h. down Willunga Hill.

FUEL ECONOMY

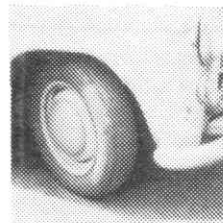
30 m.p.g. plus oil



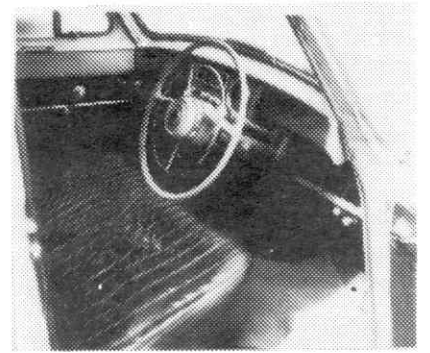
.. NEXT TO OTHER VEHICLES...



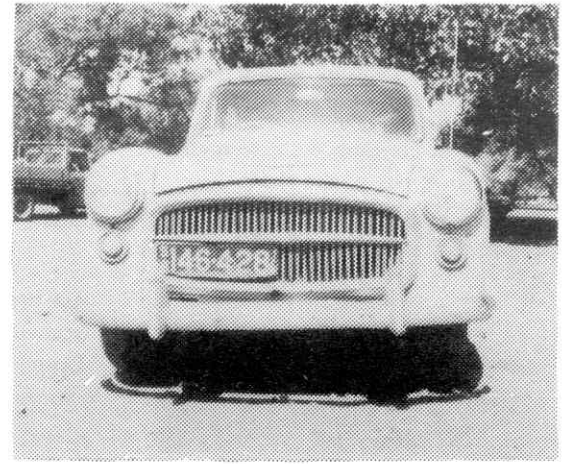
FULLY INSTRUMENTED



URNS ON A SIXPENCE!



THE PLUSH INTERIOR



A.N.E.S.A. SYMPOSIUM



On a fateful Sunday early in May, 50 engineering students from all states began arriving.

The first casualty was a 1974 Holden from Sydney which had blown a head gasket on the way over. This was successfully doctored in Kermode St behind St. Marks College.

Some time during the day the enterprising team from Tasmania purchased the TAS. UNI. TEAM TRUCK. Contact adhesive (multi-colour) was used to cover the rust holes from the alert eyes of the boys in blue.

Sunday Night saw the first combined effort of the symposium at the Pink Pig where success of the sympo was toasted all night.

Monday was the first official day of symposium activities which started with a Barrosa Tour to get as many as tired as possible so that St. Marks would not see too many late night shows, however, we hadn't recognized the stamina of the engines. Fortunately damage was slight.

Back to the tour; we managed to get thrown out of the first winery at 11 in the morning. Orlando, the next port of call, had been warned to watch out for us.

A certain Adelaide Elec. engee was responsible for one of the foulest smells ever smelt in the toilets at the back of the restaurant in Angaston.

Fortunately the rest of the trip was reasonably well behaved apart from the attempted brown-eye at the cops from the back seat of the bus on the way back.

Monday night was the Floating Welcome with the sculling competition won by S.A. (unofficially). Nobody was game for the rerun.

The cultural highlight of the evening was the selection of films which were obtained under cover from the S.A. Film Corporation Lending Library. I Don't think!!! The best of course, was "Phallac Man" again. The others included Whoppers - unobtainable from Hungry Jacks and a rather more subtle film which broached the subject of Tradesmans Entrances.

The brown eye competition was won by Past President K. Hunt whose act included smoking a cigarette and then putting it out.

On Tuesday, the Committee relaxed with a few ales left over from the night before. The rest of the crowd was also a little fatigued and showed no signs of overactivity. That night there was a mass exodus for the meal market of Adelaide, the Old Lion.

Wednesday night's entertainment was the Annual Ball where 500 free women were promised and to the disappointment of the organizers only 450 turned up. The Adelaide people who rolled up had the gall to suggest that only 50 rolled up; well all I can

say is they need their eyes checked. A minor scuffle arose over the two lovely ladies who attended the sympo. They left early.

One of the spontaneous events of the sympo, apart from those due to over indulging of the amber fluid, was the boat races. We obtained 8 boats from the unwary boat keeper and proceeded around the bend under the Uni footbridge and commenced firing barrages of the usual ammunition. Unfortunately no boats were sunk but as can be seen from the photos, the boys enjoyed themselves.

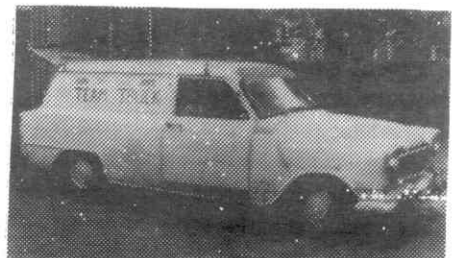
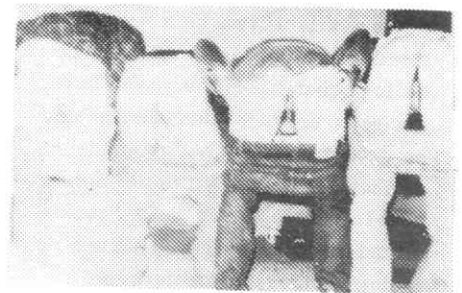
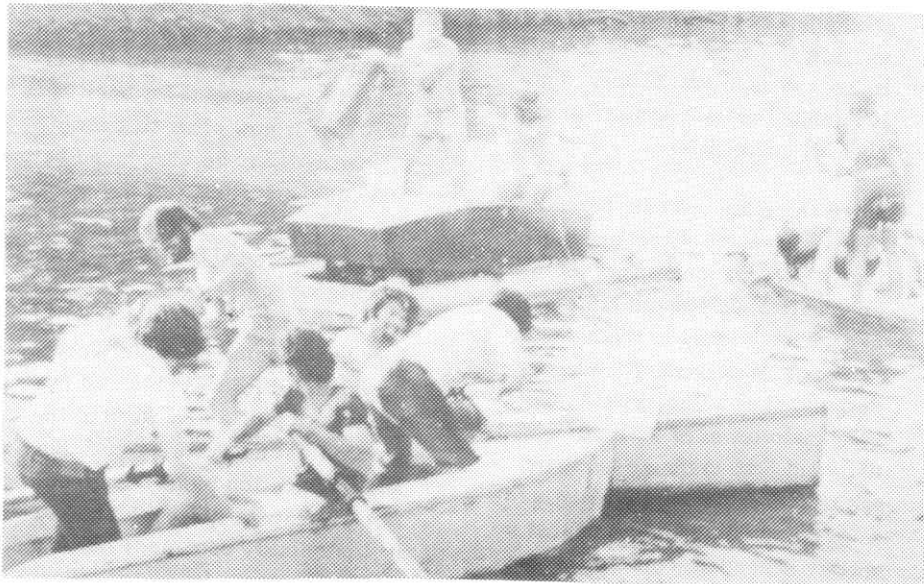
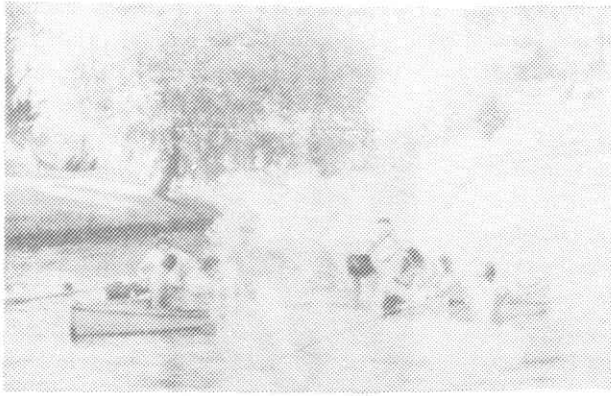
That night was a relaxed evening at the Pizza Palace where Blair Schartz never had it so good - or bad and the establishment was drained of the ever popular amber fluid.

Friday night was the occasion of the Annual Dinner, held in the Star Room of the Hotel Australia. Fortunately, grubby acts were kept to a minimum but the jokes came thick and fast and as a consequence the two ladies left again:

The committee thankfully handed over the job of organizing next year's sympo. to the Lads in Melbourne and so ended another successful symposium.

Special thanks must go to speakers for their time and pearls of wisdom.

..... DICK, STEVE
\$ DRAPS.



BULL

the dean's page



The period of rapid expansion of tertiary education in Australia, embracing the late 50's, the 60's, and particularly the early 70's, is clearly at an end. Tertiary education is being subjected to scrutiny, and after a period of some uncertainty new attitudes to it can be expected to crystallise.

The purpose of tertiary education and its value both to the individual and to the community are being questioned. There is questioning of the liberalisation of its availability which has occurred in recent years. Those who believe that the number who have access to tertiary education should be determined by the labour market are becoming increasingly vocal. These are calls for "rationalisation" of resources. We are seeing various committees of enquiry into post-secondary education being set up, such as that recently announced by the South Australian Minister for Education. We hear predictions of a fierce reaction against higher education stemming from the revitalisation of what is seen by some as a traditional Australian national anti-intellectualism.

The lasting effect of this process on our tertiary institutions remains to be seen. But we have already become acutely aware of several manifestations of it. First, triennial funding - the distribution of money for running universities in a way determined by the Australian Universities Commission on the basis of three-year plans submitted by the various universities - was suspended for 1976, and is to be reintroduced in a somewhat modified form for what will now be the 1977-79 triennium. Second, the Federal Government proposes to limit the growth of universities to 2% a year in real terms. This is intended as an average figure over all universities.

Since there are existing commitments to several newly-established universities, this means that established universities such as Adelaide can expect less money in the next few years. This university is already designated as a "no-growth" university in terms of both undergraduate and post-graduate numbers, but this does not imply that there must be no development or that no money is needed on that account.

What are the immediate implications, at Faculty level, of these changes in educational policy? There is no doubt that some desirable academic developments and hoped-for improvements in Faculty accommodation will either be delayed or not take place at all.

For a number of years, one of the Faculty's highest priorities in academic development has been the introduction of new courses which would lead to the degree of Bachelor of Engineering in Materials Engineering. Proposals for such courses were first included in submissions to the Australian Universities Commission as far back as 1970. It is now clear that such courses will not be introduced before 1980 at the earliest.

As for accommodation in the Faculty, we might recall that in 1972, at which time the Engineering buildings had become extremely overcrowded, relief was obtained by the addition of a new floor to the Mechanical Engineering building and by vacation by non-Engineering Departments of space which they had previously occupied. Although the intake quota for undergraduate

students has not been increased since that time, factors such as changes of emphasis within courses, the need to re-equip and modernise laboratories and workshops, and increases in the number of post-graduate students in the Faculty have led once again to accommodation problems. In its submission to the Australian Universities Commission for what was then to be the 1976-78 triennium the University gave high priority to building works which included further extensions to the Mechanical Engineering building, refurbishing of the Engineering Annex after its vacation by C.S.I.R.O., laboratory modifications in the Civil and Electrical Engineering Departments and extensive general renovations. The Report of the Universities Commission for the 1977-79 triennium does not recommend any of the proposed building projects, nor are they included in the Commission's list of projects with high priority in 1980. Acquisition of the Annexe by the University is in fact proceeding although it is not certain at this stage that all the space in it will be allocated to the Engineering Faculty. It therefore appears that we have to look forward to accommodation constraints for some years to come.

While the broader educational issues are in the melting pot, the individual school-leaver still has to examine his own personal motives and ambitions in making his choice of career and the appropriate university course to undertake. Of necessity the choice has to be made on the basis of limited knowledge. However, it appears that the nature of engineering courses, and of professional engineering practice to which they lead, is less familiar and less well understood than the nature of corresponding courses and practice in most other disciplines. The distinction between engineering and science is often not appreciated. Such messages reach the Faculty by various paths, not the least of which is that established by the General Engineering tutorials in Engineering I.

The lack of knowledge of what engineering is about undoubtedly diverts some good students who would otherwise have become good engineers. For some others, who do choose to take an engineering course, it leads to disenchantment when they find that the reality does not coincide with their expectations.

In an effort to help school students

make a better-informed choice and to help school teachers to offer them sound advice, the Faculty, with the backing of South Australian Science Teachers Association, is planning what was conceived as a summer school, underwent transmutation to a winter school, and finally emerged as a project entitled "Engineering Action 77". The aim is to widen the understanding and appreciation of the profession of engineering which matriculation students and their teachers have, by bringing them into contact with professional engineers and real engineering situations as well as with academics. It will include talks, demonstrations, visits to engineering laboratories and engineering establishments outside the University. It is hoped that this venture will help to reduce the numbers of the diverted and the disenchanted. In times of change it is more essential than ever that potential engineers should, at the outset of their careers, be aware of what to expect in an engineering career and, equally importantly, what the community is likely to expect of them.

DR M.K. BULL

FINAL YEAR CIVIL PICNIC

Doug.

This little excursion was held early in third term, at the Pines Oval, National Park, to present the footy pools winners with their prize. Highlights of the day were:

1. GOD taking a chair to the ablution block.
2. Billie Jean McPharlin being thrashed by Evonne Maguire.
3. Shad McPharlin looking for the big snake.
4. Kenny getting lost in the bush with his "wife".
5. The Prof eating barbecue steak with chopsticks.
6. Peter Tymukas being mistaken for one of the Prof's kids.
7. Danny Kay asking "Where's the beer?"
8. Kerry Maguire's chest marks with a greasy ball.
9. Bill Bodley's tribe destroying the volleyball net.
10. The BIG presentation of the tipster award to the magical Robin Douglas and tremendous Peter Salvesson.
11. George Sved rolling up.
12. Geoff Linke trying to shut his missus up.
13. Rixy giving the bum's rush to twenty continentals who invaded our shed.
14. Max not showing because he lived too far away.
15. Kenny leaving at 4.30 to take his missus home, and arriving at his digs at 11.30 - boy, I used to have a car like that!

CIVILS



Reading from bottom left.....

Dr. Kay, M. Cumming, Dr. Hutton
 Dr. Brooks, Dr. Bodley, Prof. Cheung,
 Mr. Culver, Mr. Ewers, Mr. Tyler,
 Dr. Moxham, Dr. Hirst.

1. Favourite saying
2. Favourite pastime
3. Probable destination.

CHEONG HEE KIAT "Harry"

1. "My name's not Harry, man!"
"Oh no, no, no!"
2. Talking to S.K. in a foreign language.
3. Head of Civil Eng. Dept., Univ. of Singapore.

CHRIS MATHIAS

1. Want to see my lacrosse gear?
2. Scoring three at Melbourne I.V.
3. Put out to stud.

PETER SALVESON "alvo"

1. "Mumble, mumble"
2. Expounding the virtues of MGB's
3. Tipping winners on the Football Show.

BOB HARRISON

1. "Who won the footy pools?"
2. Playing cards and waiting for trains.
3. President, Paul Bagshaw Fan Club.

ROB JENKINS

"Jenks", "Flexi", "Lurch"

1. "Has anyone seen Max today?"
2. Translating smut into filth.
3. Pool hall proprietor for PBD.

GORAN DRAPAC - "Draps"

1. "Oh, no kidding?"
2. Writing excuses to university parking inspectors.
3. Bookie at the dogs.

STEVE HEALY

1. (Unprintable)
2. Organising Engineering symposiums
3. Crane driver.

JIM TABOLOTNY 1. "Goddam"

CRAIG CURTIS "Tony"

1. "My name's not Tony"
2. Watching the Persuaders
3. Changing his name to Tony.

PETER TYMUKAS "Peter Router"

1. "I'm going to fail"
2. Worrying
3. Bald.

ROB HACKETT "Digger"

1. "Christ you're gross Max! "
2. Dipping at Goolwa
3. Dirty old man.

DAVE HEITMAN "Family Man"

1. "...?", Ha, Ha, Ha"
2. Singer in a rock'n'roll band
3. Cover of the Rolling Stone

STEVE POLGLASE "Polly"

1. "Burp, Belch"... "Oops, sorry Jo"
2. Getting bushed
3. Social climber

JOSEPHINE FLINT "Jo"

1. "Oh you horrors"
2. Spelling
3. Lost and found

STEVE JOHNSON "Syph"

1. "I won't be home tonight, Greg"
2. Fixing MG exhaust system.
3. Bricklayer

REX GIBBS "Golliwog"

1. "Shut that door, Robert!"
2. Betros baiting
3. Politician or Renault salesman

BOB HANCOCK "Slash", "Tubby"

1. "Close, but no rubber duck"
2. Entertaining relatives at home
3. President, Institution of Engineers.

LEE SIEU KIN "SK"

1. "Where's Geoff Dyer?"
2. Asking tough questions at seminars.
3. Interrogator for C.I.B.

BARRY MORGAN "Bazza"

1. Got the clues, Craig?"
2. Doing nothing
3. Career in the Public Service

BRENTON NANKIVELL "Nanks"

1. Peddling (into cars)
3. Car wrecker

DON BOFFA

1. "Bullshit!"
2. Squashing balls at the gym
3. Fit

PETER DRABSCH "Captain Chunder"

1. Doesn't say much
2. Not saying much
3. Spokesman for the Mute Society.

PAUL GELSTON

1. Stopping to extremes
2. Oblivion, on a Suzy GT550.

LACHLAN KINNEAR "Kenny"

1. "Nah, nah, nah", "A1",
2. Mechanizing
3. Tapered off.

MARK HILLIER "Max"

1. "Shut up, Smithy" or "Twat's next?"
2. Staying at home
3. Piker of the year

GREG RIX "Plasma Pants"

1. "Well, arr, David... I arr..."
"WOFTAM!"
2. Demising in the flying grandstand.
3. A containing half back flanker.

ANDY McPHARLIN

1. "Fine, what ever you want
2. Climbing 5AD tower
3. Wine grower in Barossa.

GRAHAM CURNOW

1. Stirring
2. Damming the impossible

PETER GORGULA

1. "Are we doing any testing today, God?"
2. Trying to get God down to the soils lab.
3. Waiting in the soils lab.

GRAHAM SPANGLER

1. "Off the cuff..."
2. Beating the Prof. to parking spaces.
3. Sewerage, E. & W.S.

ROBIN DOUGLAS "Doug"

1. "My God, you're crude!"
2. Wearing dirty old raincoats.
3. Usher at the Roma cinema

GREG BETROS "Beedy"

1. "Ah, question!"
2. Correcting D.S.B.
3. Under the thumb.

GEOFF DYER "Failure"

1. "Got a smoke, God?"
2. Going one step too far.
3. Shot in the dark

GREG DUNN "God", "Orifice"

1. "Sounds a bit woody"
2. Impersonating John Cleese
3. Playing God in the next Monty Python film.

TONY THOMAS "Wally Strop"

1. "Come on boys, this is obvious"
2. Making up for CMs mistakes in lacrosse.
3. Thomas, H.F. & O.

PETER MILLER "Cecil B"

1. "Come off it!"
2. Using big words in the wrong context.
3. Neurotic

ROB URLWIN

1. "Has J.B. been in today?"
2. Rolling up late to lectures.
3. Professional at Mt. Lofty Golf Club

RAY ROCHOW "Shock"

1. "I'll do a quick calc."
2. Attending survey camps
3. Truck driver.

MIKE SMITH "Alias"

1. "Shut up, Max"
2. Golf - plays best in June.
3. At the alter in December.

JEROME MAGUIRE "the girl", "Smog"

1. What's on at the Roma... Type of thing?" "I'll be there"
2. Clearing rooms, or going home at 12 00.
3. Crowd dispersion agent.

GEOFF LINKE "Lou"

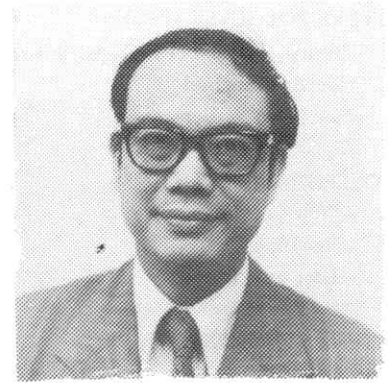
1. "It's a mad dog..."
2. Avoiding Snaxy on Monday mornings.
3. Professional hustler.

JOHN BARROW "JB", "Jack", "Wheel"

1. "Coming up the bar boys", or "Has Rob Urlwin been in today", or "When I was up at Koolong Island..."
2. Voting for labour
3. President of ACTU.

CIVIL

Professor Y.K. Cheung, Chairman of Department.



During the last two years, steady progress was made on all fronts. We have witnessed a dramatic increase in postgraduate student numbers, including two Ph D candidates and a large number of full-time and part-time Master of Engineering Science students. We have upgraded our testing equipment by the addition of the 100T Instron Machine, which is the first one of its kind in Australia.

The revision of the undergraduate curriculum was completed last year after many months of investigation and discussion, and the new second year syllabus was adopted this year. Surveying was replaced by transportation in the fourth year and the second survey camp has been dropped from the curriculum. Last year we also started offering postgraduate courses, and it was gratifying to see that apart from our own post-graduate students, a large number of practising engineers also attended various courses on a casual basis.

Academic Staff

We were indeed sorry to lose Mr. G. Sved, who went into retirement at the end of the year. However, he was subsequently appointed as Honorary Research Associate and he will be carrying out a number of research projects in cooperation with other staff members.

Dr M.J.S. Hirst joined us in May to replace Mr. Sved. Dr. Hirst completed his B. Sc. and Ph. D. degrees at the University of Leeds and worked for some years in industry. Before taking up the present appointment he was Lecturer in Civil Engineering at the University of Melbourne. His main interest is in structural engineering.

Dr J.N. Kay joined the Department in July. He obtained his B.E. from the University of New South Wales and his Ph.D. from Northwestern University and has had extensive industrial experience in Sydney and Hawaii. Before coming back to Australia he was Assistant Professor of Civil Engineering at Cornell University. He is interested in all aspects of geotechnical engineering and particularly in the analysis and design of culverts.

We were also sorry to see Dr. N J Gardner leaving us at the end of August. He was on sabbatical leave from the University of Ottawa for one year and he contributed to both the undergraduate and post-graduate teaching of the Department.

Dr. M. Arnold is on leave at the Norwegian Geotechnical Institute and Mr. D.B. Crawley is also on leave at the University of Loughborough. Mr. Crawley is currently

developing an Australian Beams Design/Detailing computer programme and he hopes to introduce the Genessys system to Adelaide.

Research

One of the most satisfactory aspects of the Department's activity has been in the field of research. Evidence of the expansion in research activities can be found in the statistics concerning the number of publications and Departmental research reports which came out of the Research projects which are now being conducted in the Department include the dynamic response of tall buildings, design and analysis of brick structures, analysis of flexible pavements, bridges under moving masses and moving loads, creep and shrinkage of prestressed concrete beams, buckling of cylindrical shells, stability of continuous stiffened plates, arch dam - river valley interaction, etc.

Honours and Awards

Robert McPharlin and Mark Mussared were awarded the Rhodes Scholarship in 1975 and 1976 respectively and we were all very proud of their achievements. Both Robert and Mark are doing post-graduate work in Oxford University.

DESIGN

CIVIL IV DESIGN by H.K. Cheong



Way Yonder in a desolate corner of Magpie land by the murky waters of the North Arm lay a 2km x 1km (they could only measure it to 0.1 mm inaccuracy) windswept piece of wasteland.

To our dismay, we the Civil IV's had been given the task of designing a mammoth fertilizer plant to be sited on this wasteland. When it became obvious that we couldn't talk ourselves out of this job we took a hard nosed attitude and got down to the business of design.

The design was divided into two stages: Stage 1 was the preliminary design when we sorted out all the info. put down all our ideas on paper and worked out little sums on our HP67's to prove that the ideas just would not work out and passed on to Stage 2. Our task in stage 2 was to get into the nitty gritty of the design and produce final calcs. and drawings from the 1st stage design briefs, or to put it more crudely we had to sort out the mess that we got into trying to sort things out in Stage 1 and to prepare this mess in as presentable and convincing form as possible.

We were split into different groups to tackle different parts of the design. So some of us became specialists in road design, some in pipe work, drainage and railways while the more unfortunate ones had a go at managing the buildings or warf AND DSB & A Crook at the same time. (DEMISE!!)

The project was made more realistic by the fact that we had to dig out necessary data and information from the relevant authorities themselves. Thus, we had meetings with officials from the E. & WS, Highways, Local Councils, Railways, Dept. of Marine & Harbours etc.

On many occasions, particularly in stage 1, we found ourselves at a loss, being unsure of what we had to do and how to do it. The confusion proved disastrous in some parts of the design.

Stage 1 groups recommended stormwater drains that could take 5.6 times the actual R/O expected, and much to the defiance of gravity some Runoff was expected to flow up slope! We had conveyor systems hanging up 50m in the air with no supports, and roads with turning curves big enough for an aircraft carrier to follow at full steam



Groups met with the advisors every Thursday in half hourly ordeals. That way they could observe us and check if we had got anywhere in our design. If we had not they'd tell us where to get.

Some facts we learnt from this project stand out clearly:

- 1) It is impossible to organise DSB & Co.
- 2) Never build a fertilizer plant in Magpie land.
- 3) Messrs Morgan, Curtis and sons WERE RIGHT you cannot get a comprehensive and convincing interpretation from One Bore Log.
- 4) Storm water does not run up slope.
- 5) B, the bludge factor increases exponentially with time

On a more serious note, the exercise was a good way to introduce us to the real life situations in Civil Engineering. We learnt a lot of things we couldn't possibly learn in the limited time of 4 years. The advisors hammered into us the necessity to look at any civil works as a whole and not as bits and pieces. That also pretty obviously (apologies DSB) required us to cultivate the spirit of cooperation and teamwork (esprit de corps and all that) and to be able to relate a particular part of a design to the rest of it. And as some of us have learnt it the hard way, the project conveys the importance of keeping a strict time schedule

....what will you do as an engineer?

SURVEY CAMP 1974

Written from memory by A.McP.
and others from C126.

The thought of spending two whole weeks looking through a theodolite, holding a tape or leaning on a staff had most of us questioning the enjoyment value the camp would hold for us. However worst was yet to come.

After being taken on an endurance run around the site to supposedly familiarise us with the various areas to be surveyed, we all settled into what was to be our accommodation for the next two weeks. The eight man huts, though a little spartan were comfortable enough. Despite a few offers to share bed and showering facilities, Josephine graciously declined and was provided with separate accommodation.

Meals became a highlight of the day as they meant a break from surveying. Ted, the cook, was well received, though some of his meals were only matched in bad taste by some of his adventures with school girl visitors.

After toiling all day with plane table and tape, and hearing Kenny say "Check That bubble", night time provided the stoppers hour, which for most of us ended up being four hours. In this period a frenzy of calculators, pens, paper and fudge factors could be observed. Lights out was at 11 p.m. as Mr. Ewers politely explained to Frosty who had just turned them on again.



This report would certainly be incomplete without a detailed account of the dreaded plague which swept through the camp in the first week. Originally known as "Failure's disease", it was not particular in who it chose as its victim. The symptoms were long bouts of profuse chugging, draining of all facial colour and loss of energy. Various remedies and preventions were tried. The most successful proved to be Kho's chinese black pills and regular visits to The Aldgate Health Barr respectively. Even our beloved leader, Mr. Cumming who had written the disease off as psychological, fell victim.

Common sense prevailed and the camp was abandoned for three days. The cause was later traced to the milk collection place (adjacent to an open sewer).

The second week proved much more enjoyable as the weather improved and the sporting of Paul Hogan shirts became the rage.

The final day, all troubles were forgotten. Final speeches from the staff fell on deaf ears as the taste of the first amber transfusion was strong on the Civils' lips.

The departure from the camp site, once Dr. Yeo moved his car from the exit road, would have outclassed any LeMans start.

Amazingly enough most of us managed to complete the work by the dead-line and pass.

ELECTRICIANS



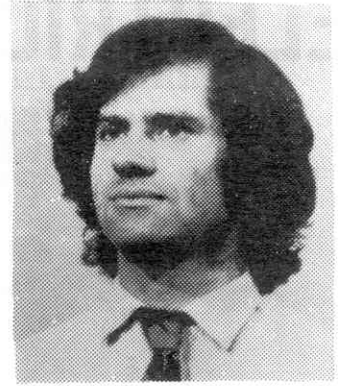
MARJAN- "One inch margin"
 TROJAR FS: "Could I borrow your notes".
 BAKONYI- Class wombat - eats roots, shoots and leaves.
 WOODS- Frustrated wombat
 BIANCO- Who?
 HANNA- "I thought HE was Bianco?"
 CLARKE- FS: "If they're old enough to they're old enough to....."
 COOK- FS: "Oh dear, dear - how droll, what a drag....."
 CRISCI- Aim: "Ave Maria"
 DAVISON- Has a singularly unspellable habit.
 DRISCOLL- His body can't keep up with his mind anymore.
 DENISON- Likes getting stuck in the barr.

EARL- His wife is getting jealous - too many people are playing with his organ.
 TRENORDEN-"Gloria" to his friends.
 FERGUSON-FS: "I think I'll go home now - mum's out shopping".
 FORWARD-The apprentice water rat.
 HO- "Hi Ho!"
 LOONG- Like horses.
 LUCAS- Like dogs.
 LUKA CS- Not a pretty sight.
 ROHRLACH-"Mrs". Known to wear polo-necks in summer.
 SALAMON-"Isn't he Bianco". "I thought he was Hanna".
 BIELBY- Feres Ttabilsie prescribed Ajax.
 SCHOLTEN-Took Feres' advice.
 SCHUTZ- Doesn't talk about IT- but we all know.....

SHEEDY- Class muscle man.
 TAN- Sees a lot of Sun.
 YATES- FS: "Doing anything Thursday?"
 or "You may think this is a silly question. . . ."
 WHITBREAD-Inventor of Bullshit Filter.
 PHILLIPS- Reason for Whitbreads' invention.
 SIMONS- Aim: To live across the road from Woodlands.
 SZALAY- Aim: To mount an FIII
 FULLER- Only thing he pokes around with is his soldering iron.
 LAWSON-No information available.

ELECTRICAL

PROFESSOR R.E. BOGNER
CHAIRMAN OF DEPARTMENT



In 1976 for the first time the number of good quality applicants seeking postgraduate places was larger than the number we thought wise to take on, and a few applicants had to be disappointed. To some extent this might reflect the job situation which we hope is temporary, but it has been influenced significantly by the getting into gear of our Master of Engineering Science programme, which is running for the second time this year. In contrast, a number of other universities are finding a serious shortfall in the number of applicants for postgraduate places. The very first Master of Engineering Science candidature was completed in 1975, going to Mik Svilans for his research leading to the design of a special purpose computer for simulating the diffusion of gases in blood, relevant to problems of deep sea diving. Mik is now a doctoral candidate at the Technical Institute in Aachen in Germany. The Master of Engineering Science programme allows candidates for higher degrees to gain credit through attending courses as well as through research. Subject to the suitability of a course to a planned programme of study, virtually any course on the campus is available. Through this programme we are now supervising some 17 part-time candidates who bring us in contact with a wide variety of stimulating problems from industry. Some of the administrative procedures are still evolving.

While the courses given by the Department of Electrical Engineer-

ing have steadily evolved over the years, and continue to serve the needs of students and industry very well, the time has come for a very serious "strategic course review". Students in the pipeline at the moment will be the leaders of the profession into the next century. The structure of Australian industry and society, and the very rapidly evolving technologies of electrical engineering make it imperative that we should ask very fundamental questions about the nature of the educational need. Universities have traditionally taught students about the intellectually challenging and fascinating technologies while the graduates frequently find that the questions they face outside the university are equally challenging but not solvable by the patterns of analysis they have been taught. Also it must be questioned whether a candidate in professional area such as engineering has to be denied the broader educational opportunities available to students in other faculties such as Arts. The question "education or training?" has a variety of implications, and we are currently looking at the question of whether a combined B.E./B.A. could be provided. For many years now a combined B.E./B.Sc. has been available to students of electrical engineering, by taking the final year of a Science degree after the completion of the third year of the Engineering degree. Also just launched are discussions with the Faculty of Arts about the possibility of recognising technology as an art, which most dictionaries do. Of course there are a large number of other questions under consideration

in the context of the Strategic Course Review, and comments, preferably in writing, about innovations that should be considered etc. etc. would be welcome. A short discussion paper relevant to this subject is available from the Departmental Office.

One of the most significant developments in electrical engineering in recent years has been the advent of the microprocessor, that is, the integrated circuit computer which can be built on one or two silicon chips measuring a millimetre or two square.

They are now being introduced in the third year of the service courses given to some other departments of Engineering, and the Department is planning to provide some short courses on microprocessors for engineers from industry in February 1977.

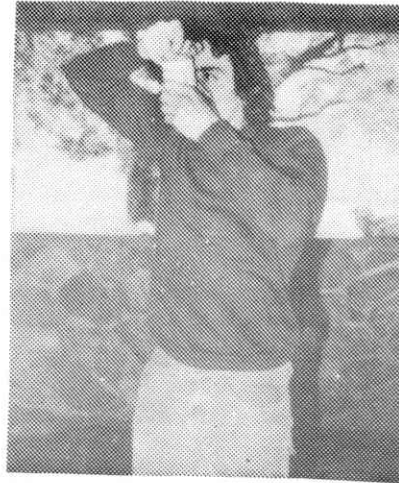
Relevant to the job scene and changing needs of engineers, Dr C.R. Evans has recently made submissions to the Industries Assistance Commission and to the Minister of Industry and Commerce in order to support the retention of skills in Australia, and expand the Australian electrical capability. He has also introduced into our course a series of lectures designed to make students aware of the opportunities, possibilities, and problems of running a business - this is distinct from the problems of "management".

FINAL YEAR ELECS

Well, someone had to do it! Here are a few words about the events in the elec. department.

As this was their last year at Uni. the final year students decided to really get stuck into some serious fun. Take, for instance, the team we didn't enter for the football carnival, and don't forget all the people who didn't go on the car rally, or the ball, or the annual dinner, or the mid-year boat trip or many other organised events. It's amazing how people can hide their enthusiasm. (NOTE how many turned up for the class photo).

The third year mob of—— (defies intelligent comment) must be congratulated for their non-arrival at the annual 3rd year versus 4th year football match, which is a much celebrated event in the elec. dept. and has now, to quote, "had the carrot".



I must not be so harsh, after all. "the lads" had quite a good time. The visit to the Hackney Cellars topless restaurant was enjoyed by those who went. Peter Simons says that he can still feel that tit in his ear. The trip up to the shack at Moonta was a pleasant relief after the exams, even if P. Simons (him again!) did not find anything worthwhile at the local high school. The end-of-semester barbeque was well attended (surprise, surprise) and most people enjoyed the various animal acts presented by Bob Clarke as well as getting stuck into some good meat. (See Photographs).

The lecturers this year, I'm glad to say, were a respectable lot and some were actually quite human (if you look close enough you can just spot the signs). Anybody who buys as much beer for the lads as Tony Parker did at the class dinner last year just has to be awarded this

years "Unit of the Year" award. This is the same as a "Bruce" but under a new, more appropriate, name. This could have been awarded post-humously if his wife had found out

Dr Pucknell (young Doug as he was affectionately known) must be mentioned for his efforts in trying to install some humour into our lectures and was a close contender to receive his second award in two years

Chuck Evans must also be mentioned as a runner up for this year's award based totally on his stunning array of well matched clothes

Well, Steve and Anne have come into the final year room again so I won't be able to write any more as I can't write and watch the fascinating show at the same time

Fergo 1976



CHEMICALS



EDVINS KNOCHS

Would like to drink his way into a dancing school for prodigal photographers

MARK RICHARDSON

Says the funny smelling green stuff he smokes in his pipe is 'Amphora'.

CLEMENT CHEN

Ambition in life is to fill a two gallon bucket with "laughter" from a third storey window.

DAVE BEVAN

Roses are red, violets are blue,
If you had exam results like Dave,
You'd be happy too.
(He's do brains of da outfit)

MARK ZED

Mark's punctuality for lectures has amazed the class this year. He's always five minutes late provided he doesn't have to pedal into the wind. His modesty impresses us similarly.

PETER BARRIEN

Doing one final year subject this year, see more of him next year. One of our more musically enlightened class members

AINSLIE JUST

Fashion consultant for CEMSS Nominee for 1976 Bowler Hat Brigade

CHEE SOH

A man (with a question) for all seasons.

KWANG (BRUCE) LEE

Absent at time of photographs, due to commitments re filming of the brilliant new Kung-Fu film: "Hong Kong Connection".

CHEMICAL

Chemical Engineering

Carry over of liquid drops in gases and vapours leaving apparatus such as absorbers, distillation columns, etc. is a major problem in the chemical industry. A fundamental study is being carried out on the way in which liquid drops are arrested and then detached from the fine filaments which are essential elements in the "de-misting pads" commonly used in industry to prevent liquid carry-over.

A somewhat different problem but also of considerable industrial importance is the eruption of gas bubbles in human tissue after deep dives, giving rise to the symptoms of "de-compression sickness". In conjunction with the Department of Aeromedical Research, a promising model of the nucleation and diffusion processes involved in the growth of bubbles has been developed.

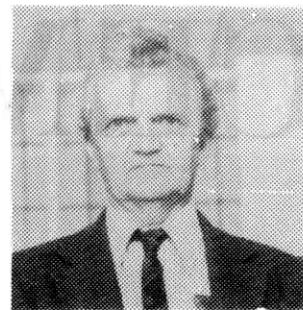
Heat transfer research is, at the moment, concentrated on the transient response of parallel plate and packed bed thermal regenerators, particularly with regard to problems of longitudinal heat flow. Another problem involving transient effects is that of the melting of ice in salt water. This is part of a study aimed at utilising ice-bergs from Antarctica to supply fresh water for Australia's coastal zones. It is not generally realised that one moderate sized ice-berg would supply all of Adelaide's water for a year. Further, the energy requirement for towing ice-bergs from the most northerly latitudes to which they drift to the South Australian coast is much less than for pumping an equal volume of water from the River Murray to Adelaide.

Professor R. W. F. Tait (Head of Department)

Materials Engineering

The research studies in Materials Engineering are concerned with the structure and properties of steels, particularly those based on high manganese contents. Additions of strong carbide forming alloying elements are being made to improve the mechanical properties. Part of this program is designed to evaluate the suitability of these alloy steels for applications requiring high strength and toughness, e.g. the mining industry. Other interesting aspects of materials engineering research include studies of superplastic materials and the mechanism of deformation and fracture of metals during creep and fatigue at elevated temperatures. Research is also continuing into the reactions occurring in dental amalgam and it is hoped to use alloying additions to improve the stability, strength and corrosion resistance of teeth fillings. Studies are proceeding on the deformation of polymers using an automated torsion pendulum capable of providing data on damping and modulus over a range of temperatures.

Finally, the use of solar energy for air-conditioning and refrigeration is being investigated. A novel method involving a low and a high boiling Freon has been proposed. Heat from the sun is used to separate the two. Evaporation of the low boiling component supplies the required cooling effect. The heat evolved when the vapour so formed is re-absorbed into the higher boiling liquid is dissipated to the surroundings. This process has many advantages over those at present in use, not least of which is the fact that it uses non-corrosive substances.



OTHER ACTIVITIES

Apart from research and teaching activities, members of the staff of the Department are involved in the work of many Committees, both within and without the University. The Department also runs a vacation school from Matriculation students. The main aim of this "school" is to acquaint school leavers with the true nature of a Chemical Engineering course by allowing them to participate in experiments similar to those actually undertaken by Chemical Engineering undergraduates. They are also given an opportunity to talk to third and fourth year students, to research students, and to Chemical Engineers from local industry.

It is with great regret that we chronicle the death of Dr E.C.R. Spooner, first Professor of Chemical Engineering in this University. As such, and also as Director of the Bonython Metallurgical Laboratories at the South Australian School of Mines and Industries (now the S.A. Institute of Technology), he was largely responsible for the establishment of the Faculty of Technology and Applied Science, whereby matriculated students of the S.A.I.T. were able to receive B. Tech. or B.App.Sc. degrees of this University. His work will long be remembered by graduates and staff of this Department.

CEMSS

Chemical Engineering and Materials
Science Society

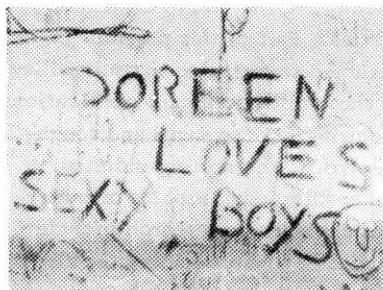
CHEM'S PLANT TOUR

Melbourne : 1976.

The majority of the group left on the Saturday night Overland, although some more intrepid individuals shared a slightly crowded car. Whilst the masses travelled second (or should we say Economy) certain more genteel members of the party took sleeping berths. They will remain nameless, of course, in deference to their modesty.

After a quiet evening playing chess with Dave Bevan I retired at a moderate hour and had a tolerably pleasant journey. In other cars of the train, I understand that some disagreement over the allocation of head and elbow room occurred after a period of solid social drinking. One group claimed 1½ bottles Scotch, ½ bottle Vodka and 1 doz. cans between four by 11 30, but this has yet to be proven. The scene at Spencer Street next morning was...well, interesting

Accommodation at Trinity College, Melbourne University ranged from spartan to palatial, but mainly only served as a place to spend the odd hour of sleep, between the unofficial and the official activities. The official programme went all day, Monday to Thursday, and culminated in what was for many the main event, Carlton United Breweries: the approval was unanimous.



Other diversions were, of course, frequent. Contact was made with our Melbourne University counterparts and with ex Adelaide graduates, and the local hosteleries were introduced. Attempts were made at various records including mass transit (ten people in a Hillman), and an altitude record in a restricted area (3rd floor, Trinity College). The participant in the latter attempt eventually fell asleep on the window sill. Dr. Roach showed an unlooked for partiality for Chinese food, and it is perhaps fortunate that the opium den trade has slackened of late, since a lost lecturer might well have been embarrassing.

The week ended much as it had begun, although possibly slightly more subdued, and despite doubts at the time, no permanent loss of students was sustained.

Ainslie Just

Now that you know what CEMSS stands for I'll tell you what we did this year. Our freshers welcome started with adverse conditions, like a med show roaring outside, but we crashed it after our show as a form of compensation. Next we had a guest speaker night (a serious exercise), followed soon by a Brewery tour to Southwark (I advise future patrons of the hazards of crossing Port Road after 1½ hours in the tasting rooms). We finished term one with a staff vs. students tennis match at Loftia Park - the only difficulty being tearing the chops apart after they were conveniently frozen over the weekend.

In second term we showed our enthusiasm at the AUES footy carnival by fielding a team of 19 players. We had our gala event of the year late in 2nd term, the annual dinner and A.G.M. at the Hilton Motel. After the customary reading and blessing from the bible, (Chemical Engineering Handbook 5th ed) we proceeded on the usual course of elections, presentations of awards to lecturers and students, slide show and miscellaneous other entertainment. The president entertained the guests at his residence for balance of the evening.

I feel those who participated in the years activities were wholly satisfied.

E. Knochs

Office Bearers 1976

President : E. Knochs

Secretary : A. Just

Treasurer : M. Zed.

Historian : D. Bevan

(appointed 2 days prior to dinner).

MECHANICS



- | | | | | | |
|--------------------|---|--------------------|---|----------------|---|
| LOU ADAMS | : Insurance Salesman.
Say no more. | LEE KERNICH | : A smile and a song | GREG. PITMAN: | A cheerful moaner. |
| IAN BOYD | : Aristocrat. Has
great potential as
a dentist. | FRANK LANDER: | Sold Australia's
wind power to the
Russians | N. QUYNH | : The cat in the hat |
| STEVE
EDMONDSON | : Forsook a great
piece of Austral-
iana (F J.) for a
Fiat. Inventor of
the motionless
quiet saw | MIKE LEANE | : Spiritual leader of
the pack. | JACK SCHMIT | : WAKE UP! |
| SIEW FOO | : Who? | STEVE LEWIS | : The gentle giant. | TONY SMEDLEY: | Someone you can
count on. |
| PAUL IM | : Him. | JOHN LLOYD | : Man of a thousand
tales. | TAN | : None of these |
| JACK ISKANDAR: | Chief engineer in
charge of main-
tenance of Wobble -
master Secret
Weapon Bicycle | PAUL MULLER | : Mr. Smooth | N.N. TRUNG | : Not a bad idea |
| | | DICK PAGLIARO: | Successor to Steve
McQueen. | PETER WHEELER: | The quiet but
deadly type. |
| | | STEVE
PENNIMENT | : Likely to succeed
at anything he
doesn't try. | IAN WISHART | : Sure to make
someone a great
little father. |
| | | | | DEVON DOBLE | : Expected to
graduate soon. |

MECHANICAL

Dr. J.R. Dyer (Acting Chairman of Department)

This year has been a very successful one for the Department of Mechanical Engineering. It is, however, part of life that a disappointment often accompanies a run of successes. We suffered one major disappointment during the year. The planned addition to the building, which would have provided additional space for the over-crowded Engineering Workshop (shared between Mechanical and Civil Engineering) and new laboratory space, will not be built as soon as we had hoped. Obviously, without the new building, some developments within the Department will have to be curtailed. However, I am confident that we can adapt to the situation and make better use of our existing space. This will mean, of course, that conditions may become more cramped than we would like to see.

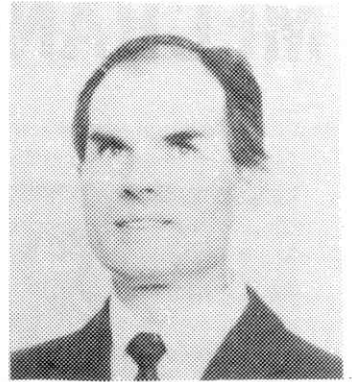
Professor R.E. Luxton, who joined the Department early in 1974, has temporarily relinquished the chairmanship of the Department to enjoy a well-earned Study Leave of six months. It is pleasing to record that the present Dean of the Faculty is Dr. M.K. Bull, who is also Deputy Chairman of the Department. During the year we welcomed back Dr. D.A. Bies as Reader, and Director of the Acoustics Laboratory. He was formerly Senior Research Fellow in the Department. We also welcomed two new members of staff. Mr. E.C. Semple came to us from the Royal Aircraft Establishment at Farnborough, U.K. and his field of interest is automatic control. Our other new member is Dr. C.J. Abell, who was formerly at Cambridge University. Dr. Abell specialises in heat transfer and fluid mechanics and has already made a valuable contribution to some of the postgraduate research programmes

During the year, the Department was very active in research; many papers were published or presented at conferences or symposia. Both Prof. Luxton and Dr. G.L. Brown presented papers overseas. It is of particular interest that Dr. Brown recently visited the U.S.A. to give an invited lecture in the fluid mechanics of the chemical laser. On his return journey, Dr. Brown gave seminars at Oxford and Cambridge Universities and also at the University of Southampton and Imperial College on his important research into the structure of and mixing phenomena in turbulent flow.

In October, a large contingent from the Department, comprising six members of staff and four post-graduate students, attended the Vibration and Noise Control Engineering conference organised by the Institution of Engineers, Australia and held in Sydney. The Department's strength in the area of applied Engineering Acoustics can be judged from the fact that members of the Department presented six out of the 44 papers given at the conference.

The Department's contributions to the engineering profession have not gone unrewarded. The Multi-purpose Data Acquisition System conceived by Dr. Brown and Mr. T.J. McDougal (Honours Mechanical student in 1973), and developed and built by Messrs. H. Bode, P. Walker and G. Osborne of our Electronics Workshop, received the South Australian Engineering Award for 1975.

During October, Professor Luxton, Mr. Walker (technician) and Mr. Frank Lander (final year student) participated in the International Turbulence Comparison Experiment



(I.T.C.E.) at Conargo, near Deniliquin, N.S.W. Teams of research workers from seven countries attempted to measure at the same time and at the same location the fluxes of momentum, heat and water vapour in the lowest 15 m of the atmosphere. The stimulus for this international experiment was the unexplained difference in observations in various countries. The Adelaide team confined its attention to the measurement of momentum and heat flux. During an interlude in the I.T.C.E. programme, Professor Luxton, Dr. Abell and Mr. Andrew Thomas (postgraduate student) took the instrumentation to Naracoorte to observe the effect of the solar eclipse on wind turbulence up to 15 m above the ground. The aim of this experiment was to provide quantitative data on the expected suppression of turbulence close to the ground during a solar eclipse. The results of these experiments are eagerly awaited by engineers and scientists around the world.

Owing to lack of space, I cannot describe the many other activities in the Department. However, I should mention that the teaching activities in the Department are making valuable contributions to the engineering profession both in Australia and overseas. In conclusion, it is most appropriate that I acknowledge our fine teams in the secretarial offices, in the workshops and in the laboratories that assist the academics in their many pursuits.

When Dr. Fowler set the task before his Third Year Machine Design students to design and build a vehicle powered by a regular party balloon, little did he realise he was formulating what has since been hailed as "the Engineering Spectacle of the Year".

balloons

Spectacle it was indeed, as 8 teams of would-be winners fielded the fruits of their toil. The vehicles which could only be described as "interesting" were each rigidly tested for compliance with contest standards

The rules were:-

- (1) Each vehicle must be powered by one standard balloon of approximately spherical shape and with a maximum radial diameter of 280mm.

This means that balloons could not be inserted inside one another.

- (2) The balloons must not be constrained. This preventing an entrant from constructing a steel cylinder and inflating the balloon inside to thousands of p.s.i. ~~te of thousands p.s.i.~~
- (3) The balloon cars front must be behind the start and measurements would be taken from the front.
- (4) The balloon cannot be employed in a manner other than inflation.

This presented the balloon from being twisted up like a rubber band.

- (5) The winning car is the one which goes the farthest. The course was the asphalt between the Civil and Electrical Building and the Mechanical Building, with the start under the connecting walkways.

The exercise was directed at getting the most use out of a limited (and quite pathetic) source of energy. Each Car was assessed as a design exercise, and was written up in a report by its designers.

On the afternoon of the 1st of September with onlookers packing the walking bridges and hanging out of windows, the overcrowded course was run by the first entrant. Each vehicle made 3 trials with the best distance counted. The first entry made its three runs in succession but due to the importance of the ABC Cameraman, (and the discontent of the crowd), the subsequent runs were made alternately.

The day was sprinkled with some outstandingly notable performances. "TURBO-TERRIFIC" with its turbine powered rear wheel drive thrilled many a spectator with its chrome mag wheel fats and racy paintjob. Low and slinky it purred down the 30 m track before a suitably impressed audience.

Russell Schulz is a name not to be forgotten, having received a spontaneous standing ovation as his 4 foot by 2 foot steel car remained behind the starting line while its balloon rocked gently from side to side with an ever, diminishing diameter. A true fighter though on his second trial, after a tense period of setting up, the machine started off amid roaring cheers from the crowd. It moved quite a way too and won him second place with a distance of 16 metres.

The glory of the day however belonged to the eighth competitor as he lay down nervously behind his extremely unorthodox contraption, which incidently was remarkably similar to last years winning entry, (only that was powered by mousetrap). Before a hushed crowd, his device slowly jettied 22 metres down the track. The silenced crowd applauded almost as spiritedly as on the occasion of Russel Schulz's first attempt. At the end of the day the vehicle, in making its final and best run went out of the course into the carpark and collided with a parked car, 46.65m from the starting line.

By the eighth competitor who shall remain anonymous.



rex & pete (editors)

faces

(and things...)



chris hutton



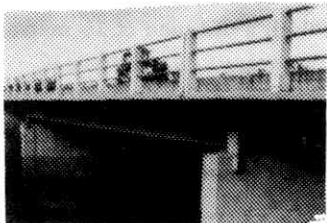
BRIDGE GRAFFITI!

salvo



$$u = \frac{v}{\sum ojd}$$

David & the coke machine...



BRIDGE



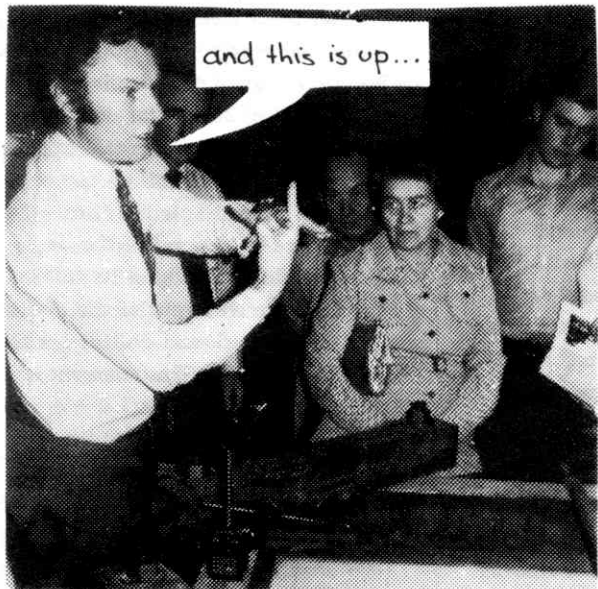
Bazza



THE UNIVERSITY FOOTBRIDGE

I personally think the bridge looks like one of the more arduous of Mr Sved's homework exercises.

FROM A 2ND YEAR MECH. ENG. ESSAY.



and this is up...



host & comper...

...da boys...



THE ASSOCIATION OF PROFESSIONAL ENGINEERS, AUSTRALIA (A.P.E.A.)

WHAT IS A.P.E.A.?

A.P.E.A. is a national organisation, with approximately 16,000 members, which was formed in 1946 to raise the remuneration and status of professional engineers. It is a registered organisation under the Commonwealth Conciliation and Arbitration Act and represents professional engineers in all fields of employment. It is the only organisation working exclusively on the industrial interests of qualified professional engineers.

WHAT DOES IT DO?

As a professional organisation, A.P.E.A. is concerned that the relative position of the professional engineer in the salary structure of the community is not undermined by changes occurring in areas outside engineering. It works to consolidate, extend and improve salary levels through negotiation and agreement and all its submissions are based on facts which have been thoroughly researched.

A.P.E.A. acknowledges and adheres to the code of professional engineering ethics with its emphasis on the professional engineers responsibility to the community.

WHAT DOES IT DO FOR STUDENTS?

A.P.E.A. offers engineering students, through affiliate membership, a valuable opportunity to become acquainted with their professional Association and its activities by attending meetings and receiving the Association's publications. Affiliate members are kept abreast of trends and developments in their future sphere of employment.

As Appointments Advisory Service is available to assist affiliates in choosing suitable employment and publishes a list of all advertised professional engineering positions available in Australia.

Students should be interested to note that affiliate members are not required to pay any subscriptions and there is no obligation to become a full member on graduation, although it is expected that they would wish to do so.

