

WANDERER

Marion Island newsletter

March 2016



FROM THE TEAM LEADERS OFFICE:



Hi,

The month of March has been another great month on Marion with the ecstatic team and this takes me back to the first time I heard stories being told about Marion Island.

It was in the latter part of the year 2011 on a remote site in Jijiga, eastern Ethiopia when I transferred series, movies and a lot of music from Hugh Purdon's hard drive to my hard drive. The transfer of media took so long and that's when I asked the question; where did you go to with this entire media?

Hugh, who had just arrived, was a new camp/logistics manager and had just joined the same company I consulted for so we became great friends as I heard about his journey to the pristine island. Hugh Purdon was a sealer on M67 from 2010-2011.

I will never forget the stories that were told then and not realizing that one day, I will have the opportunity to see Marion Island for what it is and to be part of the research that is ongoing for years to come.

I have included the following article on our famous "red taxi" The SA Agulhas 2 which will be expected to enter the PEI waters soon.

Hope you enjoy the read...

Sherwin

The Agulhas II

By Sherwin Hiralall



https://en.wikipedia.org/wiki/S._A._Agulhas_II

Unlike the original, the Agulhas II was purpose built to be an ice-breaking research vessel. The bow is designed to break sea ice of up to approximately 1 m thick, while still travelling at 5 knots. She is the first ship in the world which is allowed to carry more than just passengers. The innovation doesn't stop there however, as she is also the first ship in the world to satisfy SOLAS (Safety of life at sea) stringent safety specifications. Safety is taken so seriously in fact, that under-deck heating keeps the decks ice-free even at -35 °C.

The eight permanent and six containerized laboratories enable the on-board scientists to perform oceanographic, meteorological and biodiversity research. Mapping the sea floor and sample taking is one of the core functions of the vessel which makes her one of South Africa's prized jewels. There is an automatic weather station on board which correlates with South Africa's weather station relaying weather statistics in real time.

Apart from the massive research capabilities, the SA Agulhas II boasts facilities such as an auditorium, gym, sauna, bar and a fully fitted library. We plan to remove Marion's Jacuzzi and place it on starboard side...just joking 😊



https://en.wikipedia.org/wiki/S._A._Agulhas_II

The magnificent top view of the vessel which is rarely seen unless you talk in a pilot tone to the helicopter captain and convince him to take you on a flip ride...(don't try it...never works)

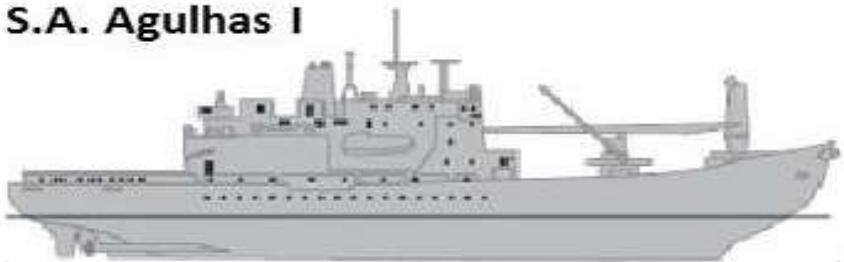
At the peak in the centre of the vessel, with a blue background one will see the DEA (Department of Environmental Affairs) emblem.



http://www.bdlive.co.za/incoming/2012/08/07/agulhas.jpg/ALTERNATES/crop_400x250/Agulhas.jpg

On the side of the vessel is the SANAP logo (Photo Wikipedia). This is the famous background for our team's beardless photos as we prepare to leave our homes for a year.

S.A. Agulhas I



Length: 111.95m

Breadth: 18.5m

S.A. Agulhas II



Length: 134.2m

Breadth: 21.7m

https://en.wikipedia.org/wiki/S._A._Agulhas_II

The bitter old rivalry between the old gal and the new sleek chick...

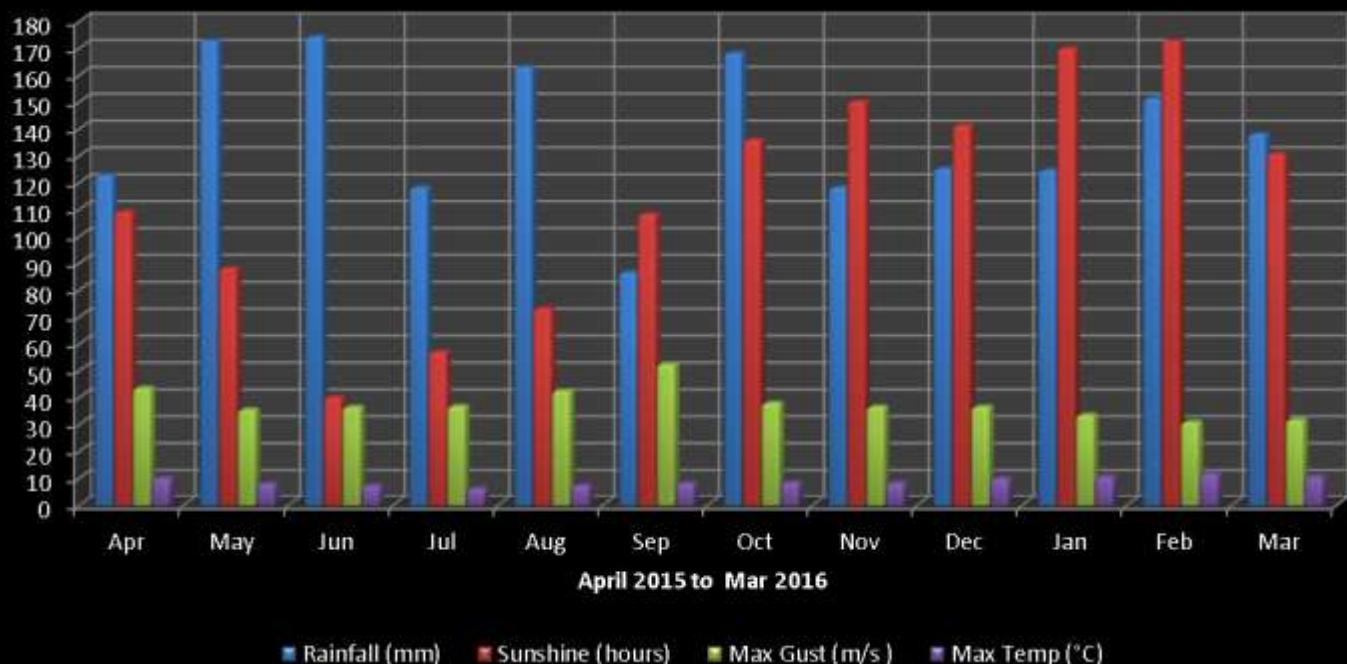
The above quote was taken note of as I was writing this article and if one puts on specs, you may see that the bottom image appears to be slender, longer and modernized in many ways. Although higher than her predecessor she is longer which makes her more stable in the water thereby reducing the effects of motion sickness.

To all the crew, purser ☺ and captain and not to forget the casual crew, I would like to thank you for all the effort put into keeping the SA Agulhas II in prime condition...this must have been a hectic skivvy!!



M72 expedition in a Met-shell

By Jerry Ramonyai



The graph above shows a summary of the total amount of rainfall, sunshine, maximum wind gust and maximum temperature from the time M72 arrived on Marion Island (April 2015) to our last month before takeover (Mar 2016).

Marius Rossouw

The botanist



What is your job on the island? Explain your day to day activities

"I am the botanist on M72. My job is to do physiological experiments on the blechnum to try and figure out how they will respond to climate change. I am also the gardener, but I don't have to do much since the plants get watered enough and the seals trample the grasses."

Where is home for you? What did you do before you came to the island?

"Cape Town and this place. I was (and still am) a student of the University of Stellenbosch and I have been studying plants on this island since 2009"

What has been your best experience on the island?

"In the field: standing on Katedraal point on a clear day or drinking from the lake at Long Ridge South.

In base: New Years and Christmas"

What has been the worst weather you have experience while being outside and what were you doing at the time?

"I was on my way to Katedraal and I walked into an ice storm. I am sure the winds were in excess of gale force and ice started to form on my goretex. Pure, unadulterated character building."

Would you spend another year on Marion Island and why?

"For sure! There is so much more I want to study here. There deeper we delve into the workings of the island, the more questions get asked."

Name three things you would advise an M73'er to bring

"Optimism, ski socks and a cup of cement."

If the ship could come right now and bring you three things, what would they be?

"Any three things? A pear, an avocado and some wine."

Where is your favourite place on the island?

"Base, because the windows can't open. ;) My real favourite place is the walk from behind Juniors to the top of First Red, walking next to the Van den Boogaard river and Tafelberg is one of the best experiences of my life"

What was it like growing your hair out this year?

Was it a good or bad experience?

"I did not enjoy it as much as i thought i would. I am not fond of afros and my hair only has two states: afro and short. Then again, I am now the proud owner of a 20cm Mohawk. So we can say it has been a mixed bag."

What is your favourite and least favourite animal on the island?

"My favourite animal is the skua. My least favourite animal is a tossup between tropicalis and kings, just because they have both made my life quite difficult after long days. But I will miss them when I am home."

Abuyiselwe Nguni

The geomorphologist



What is your job on the island? Explain your day to day activities

"My job on the Island is to keep the rocks safe and away from all the animals lol. On a more serious note; I am a Field Assistant for the Geomorphology group (Landscape and Climate Interactions, Marion Island). I have loggers and stations all around the Island which I have to check, maintain and sample occasionally, especially Soft plume which I download data from every 5 days."

Where is home for you? What did you do before you came to the island?

"Queenstown, Eastern Cape. I was doing my BSc Honours with the University of Fort Hare."

What has been your best experience on the island?

"Tough question, everything has been great. I can tell you more but we don't want a 100 paged Wanderer lol. It's been truly an amazing experience, life changing!"

What has been the worst weather you have experience while being outside and what were you doing at the time?

"Oh man, I had a massive graupels storm while doing my monthly sampling and downloading data at Mesrug."

Would you spend another year on Marion Island and why?

"Yes, I probably will. I want to study towards a PhD and what better place to form basis of your study than Marion Island?"

Name three things you would advise an M73'er to bring?

"A sense of community, tolerance, a titanium pair ;)"

If the ship could come right now and bring you three things, what would they be?

"Speckled eggs, Fanta grape and a job lol."

Where is your favourite place on the island?

"Can I have two? I think I'll have two: Kaalkoppie and the Interior (Katadraal Krans onwards without snow)"

What was it like growing your hair out this year? Was it a good or bad experience?

"I'm indifferent about it. Some days I love it and others I just want to shave it off. I just embrace it. It's part of the experience."

What is your favourite and least favourite animal on the island?

"I have two favourites here too. My Skua dudes and King Penguins. I don't particularly feel anything towards the Shags so let's say they are my least favourite."

Rierre Joubert

The SANSA guy



What is your job on the island? Explain your day to day activities

"I maintain all of the South African National Space Agency's (SANSA) equipment on the island. This includes a magnetometer, seismometer, tidal gauge and VLF (Very low frequency) radio projects. A few of the projects are part of world wide networks where the remote location of Marion Island provides valuable data."

Where is home for you? What did you do before you came to the island?

"Pretoria, the island is my first real job after graduating from the University of Pretoria (Computer Engineering)."

What has been your best experience on the island?

"Climbing Mascalin peak and exploring the interior with AJ, we were the first ones on the team to reach the peak and also did it while there was still a lot of ice making for an interesting experience."

What has been the worst weather you have experience while being outside and what were you doing at the time?

"Marius had to retrieve some devices from Katedraalkrans and we decided on doing it a specific day. Not people to go back on our word, we headed up in a little bit of rain, this quickly turned quite awfull. While we were never unsafe and well prepared, realizing how quickly things can go bad is an eye opening, character building experience..."

Would you spend another year on Marion Island and why?

"A year is a long time, and it depends where I am in life. Short answer yes, it is such an amazing experience I would not mind doing another year."

Name three things you would advise an M73'er to bring

"Alcohol, coffee and a positive attitude"

If the ship could come right now and bring you three things, what would they be?

"Three of my good friends."

Where is your favourite place on the island?

"The answer has to be the interior, especially in the middle of a snowstorm – absolutely amazing."

What was it like growing your hair out this year? Was it a good or bad experience?

"Irritating, I do not think I would ever do it again."

What is your favourite and least favourite animal on the island?

"Favourite – This changes often but the Wandering albatross, Macaroni penguins and elephant seals stand out."

"Least favourite – Mice, horrible ceatues that nibble on the only chocolate you have left..."

Marion Island's other birds, including Grietjie and Piet

John Cooper,

Antarctic Legacy of South Africa, Department of Botany and Zoology
Stellenbosch University

Marion Island supports large populations of breeding birds, all seabirds with the exception of the Lesser Sheathbill. A number of other seabird species have been recorded as non-breeding vagrants, and from time to time land birds, blown far off course, are spotted ashore. But what of birds deliberately taken to the island? The Antarctic Legacy of South Africa project has records of four bird species deliberately introduced to the island since 1948, with two pet parrots being the most unusual.

Chickens

Domestic chickens were taken to Marion as early as January 1948, when eight Black Australorp hens and two cocks were put ashore from the H.M.S.A.S. *Natal*. Chickens were regularly taken to the island for both their eggs and meat until the last known batch of around 75 in February 1970. After starting off being housed in the cave ('La Grange Villa') at the back of Boulder Beach a large hen house was built in Prion Valley near the Kapua Bridge. This was eventually removed in 1972 and by 1974 chickens were no longer present on the island. It is thought feed brought in for the chickens was responsible for the introduction of several alien plants, notably the grass *Agrostis stolonifera*.

Geese

Marion's first Team Leader, Allan Crawford brought a few domestic geese from Tristan da Cunha with him in January 1948 aboard the H.M.S.A.S. *Good Hope*. Two died in Cape Town on their journey. So far, ALSA has not yet come across a photograph of these geese, nor a clear statement of what became of them on the island. Presumably eaten?

Parrots

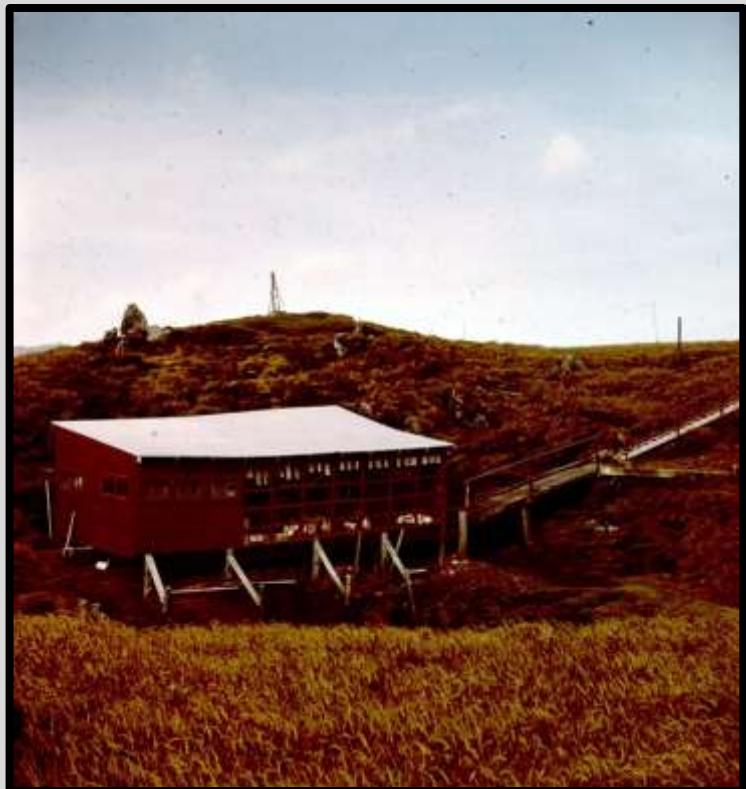
An African Grey Parrot known as 'Piet de Pappegaai' was present on the island in 1962/1963 as a pet of a team member, before being taken back to South Africa in March 1963 by Jan Nagel (M19 Team Leader) who may well have been its owner. Apparently it used to sit on the back of 'Oubaas', the pet dog then on the island. Unfortunately ALSA has no photograph of Piet.

'Grietje', an Amazon parrot, was the pet of Benjamin Sciocatti (M22 Team Leader), and was present on the island over 1965/1966. ALSA has made contact with Ben Sciocatti and hopes to find out more about his parrot, including which species of the many Amazon parrots it was - and what became of it.



Top: Ben Sciocatti poses with Grietjie, photograph by Brian Huntley

Below: Members of M22, with Ben Sciocatti (back, left) holding his parrot, photograph by Brian Huntley



Top right: Johan Bothma (Team Leader & Meteorologist, M12 & 13; November 1954 – March 1957) feeds a friendly Australorp cock.

Top left and middle: Two views of the hen house alongside Prion Valley stream

Bottom: The original chickens forage around a building in early 1948, photograph by Allan Crawford

WHY MARION MATTERS?!

By Abuyiselwe Nguna

Geomorphology Edition

Geomorphology - is the scientific study of the origin and evolution of topographic features created by physical, chemical or biological processes operating at or near the Earth's surface.

Geomorphological research on sub-Antarctic Marion Island initially focused on documenting Quaternary glaciations. More recent research has been dominated by mapping active and inactive periglacial landforms in the eastern sector of the island, and investigating cryogenic (low temperatures) processes and landforms within a hyper-maritime context.

Until recently, the interior of Marion Island has been covered by snow. Climatic amelioration is said to be the main agent responsible for the disappearance of the former permanent snow line. The recent sub-aerial exposure of this area now enables geology and geomorphology to be documented. Marion Island having been the proverbial front row seat in a manifestation of landscape responses to climatic amelioration, melt out features, mass movement landforms and the emergence of rudimentary aeolian landforms with the exception of observation of sorted

stripes, descriptions of geomorphological landforms in the Central Highlands are scarce as this area has, until recently, been permanently covered by snow. Receding snow cover may enhance frost and aeolian processes, which could result in a countless number of geomorphological landforms.

Which is basically Why Marion Matters to us Geo's! I have a few photos of these landscapes/ landforms and features to feast your eyes on. Enjoy.



Mega-ripples at Mesrug (Aeolian feature)



Recently exposed Central Highlands of the Island
(Katedraal Krans)

Sorted Stripes at Tafelberg extension



Needle – Ice



Weathering and mass movement at The Amphitheater

It's not just about keeping the lights on...



The Situation:

When it comes to conversation on, the details of power-generation non-technical personnel lose interest. They immediately expect a bunch of unknown terms being flung around, forming conversation that could just as well be in a foreign language.

Aim of this article:

The aim of this article is to share some insight into the modern world of power-generation and the newest technology available in an interesting informative, but also understandable, way.

Why is this important?

'Clean' and Effective power generation at the research base on Marion Island plays a critical role in the world class research being done here.

Getting a bigger, more influential audience involved in having a better understanding of how this is currently being done versus how it could be done, is crucial in ensuring we embrace all the new technology being discovered around us and to utilise it to the advantage of the SANAP project and ultimately the environment we operate in.

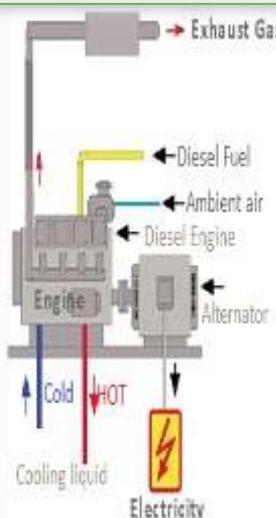


Figure 1: Typical, diesel generator set as would have been used pre 1996. Note the very basic, exhaust system.

Conventional Diesel Generator Explained:

A generator set mainly consists of two components, a primary-mover and the generator. The sole function of the diesel engine is to act as the 'primary-mover', supplying the rotary motion needed by the alternator to generate electrical current via electromagnetic induction.

Research and Development:

For the most part generators have remained the same over the decades. Most improvements recently made are in the finer details. Diesel engines on the other hand are a whole different story. The amount of resources companies have spent, in research and development over the last two decades are astronomical!

Exhaust emissions...

Environmental protection agencies in first world countries implemented advanced emission standard regulations on an interim basis in 2010 and then finalised it in 2013. →

Since then a 95% reduction has been seen in engine tailpipe emissions –this however excludes carbon dioxide, compared to non-regulated levels back in 1996 when the first generation of emission-standard regulations were implemented.

A 95% improvement!

Engine development and manufacturing companies had to seriously look into new ways of improving on their products to achieve these advanced regulations. For some companies this had catastrophic financial implications, however to other larger companies this presented the industry changing opportunity to further research and development, within a hugely competitive industry, while still being able to remain profitable. This massive milestone however didn't signal the only breakthrough made.



Figure 2: Hexadecane ($C_{16}H_{34}$) one of the many chemical formulas for Diesel fuel in its basic form with a cetane number of 100.

Ideally:

$$C_{16}H_{34} + 49 O_2 \rightarrow 32 CO_2 + 34 H_2O + \text{ENERGY}$$

Would be the chemical equation for the complete combustion of Diesel in oxygen resulting in only water and carbon-dioxide being expelled as "exhaust fumes".

Back then: Emissions varied between- Nitric-oxide(NO_x), Carbon (C) as soot, Carbon-monoxide(CO), unburned hydrocarbons (HC 's) and Sulfur(S) in various combinations.

Now : Since the development of exhaust-after-treatment technology and near removal of sulfur in fuel, combined with advanced engine development, emissions are very close to ideal with mainly Nitrogen(N), Carbon-dioxide(CO_2) and Water(H_2O) being released as exhaust emissions into the atmosphere. Diesel fuel additives contribute to less than 1% of the total composition of which all are regarded as safe'.



Figure 3: Modern day diesel engine with a complete range of exhaust after treatment components.

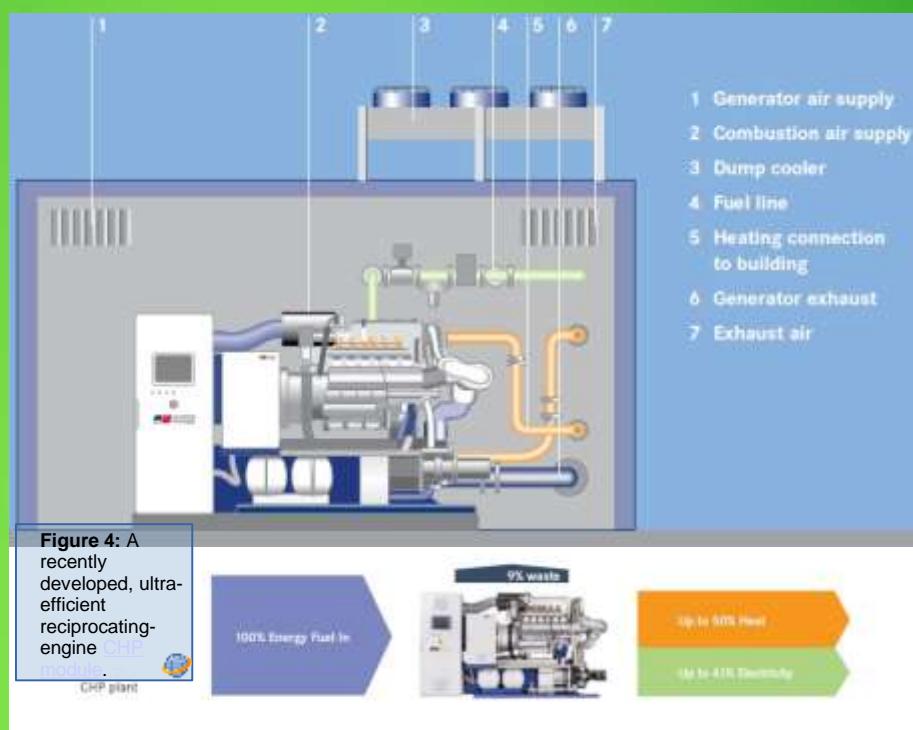


-Indicates Hyper-link

Co-generation technology.

Today, even with highly developed diesel engines, only about 45% of the energy in diesel fuel are converted into usable electrical energy by a diesel generator set.

Co-generation sets on occasion have been found to exceed 90% efficiency. Co-generation or CHP is the process where lost heat energy is recovered from any internal combustion engine and utilised to greatly improve overall efficiency. The recovered heat energy can then be used for central heating or domestic hot water. Cutting initial diesel fuel expenditure nearly in half.



CHP is nothing new, but major recent advances in technology have made this a non-negotiable for installation in new developments, especially remote areas where generators are expected to run around the clock, making this energy recycling principle ideal for a place like Marion Island. Having a look at figure 5 below, makes it clear that only letting a diesel generator run for the sake of electricity generation is not a very cost effective solution.

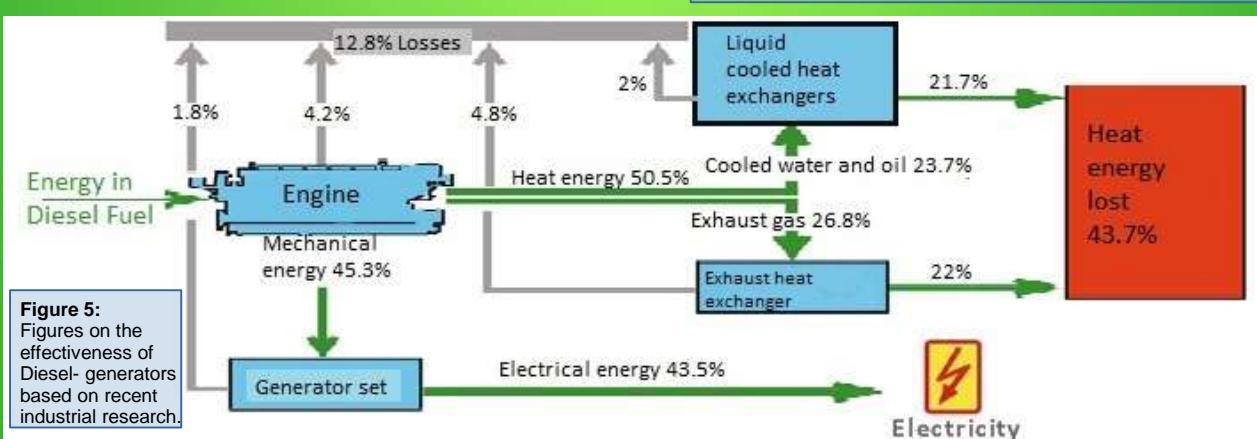
When the new research base was unveiled in early 2011 it enjoyed bragging rights in the media. Not just for the "wow" -factor it presented as being a modern engineering marvel, but also the attempts made to build an energy efficient power plant. This was clearly visible in the exhaust heat-energy-recovery system that came as part of the original design plan. Investing in this technology was NDPW making it clear that saving costs and utilising resources to their full extent was important. Especially in an environment as remote as Marion Island.

This was a step in the right direction, but it remains important for us to continue improving on past efforts. To continue pushing for that possible 90% plus figure. From the values obtained from figure 5 it can be said that the diesel generators at Marion base ideally utilises 65.5% of the energy obtained from diesel fuel burned. By looking to further improve our systems we could potentially utilise a further 22% of energy within the fuel currently being used. What happened during the construction of Marion base should not be seen as a once-off attempt at generating greener energy, but rather an investment in continuous improvement. *



About the author

A.J. Grunschloss; a first time islander and diesel mechanic for SANAP. He dreams of visiting as many Antarctic bases as possible for research programmes of various countries while learning about and doing the work he is passionate about. He enjoys the unique challenges presented by power generation in sensitive isolated environments and hopes to become a specialist in the field!



GROWING UP WALBIE

Photography by Stefan Schoombie

The Wandering Albatross (Walbie) monitoring program is one of the oldest on Marion Island.

Here is a glimpse of the Walbie chicks as they grow throughout the year.

MARCH

Most chicks will have hatched by the end of March.



APRIL

Brood guard period – parents take shifts sitting on the nest to brood the chick



MAY

Most chicks are being left alone on the nest (chick rearing period)



JUNE

Chick rearing period



JULY

Chick rearing period



AUGUST

Chicks start losing their down

SEPTEMBER

More black feathers appear, making them look slightly comical



OCTOBER

Chicks start exercising their wings and wandering around



NOVEMBER

Most have lost their down and are starting to take off



DECEMBER – JANUARY

Most chicks will have fledged by early January the following year while the new breeders arrive, who will have started incubating in late December.



In a few years the fledglings will return to the island and start looking for a mate to continue the cycle.



MARION MAD HOUSE

20 people, one island, one year.....



Ewald

What is the first thing you will eat when we get home?

What do you wish you had brought with to the island this year?

What did you miss most during the year?

Where is home for you?

What is the second thing you will eat when we get home?

What did you bring that you didn't use?

Are you excited for the voyage back? Why?

What is the first thing, besides food, you will buy?

Who is waiting for you at the pier?

What are your plans when we get home?



Boy

Not tuna

Pizza

Projects

My 4TB hard drive

People of Age

My godchild

Centurion

Springbok with family

A good

Strawberry milkshake

Burger

Stretching set

A desktop

Nope, seasick

Not particularly

Wireless USB receiver

I'll have to see

Family

To immigrate

Swimming lessons



Nkoane

I don't worry too much about food

First ascent rain pants

Nothing specific. I guess I'm used to this

Ga - Mathabatha



Jerry

My mom's pap and chicken

Nothing - I'm covered

My business

Heaven - I am a visitor here

Depends on my sister

I will have to go check

Yes, so that I can continue with my plans

A suit

I think, first ascent rain pants

A friend, hopefully

Uhm...not sure yet

Grow my business - RACPRO



Janine



Oyster



Tegan



Kate

What is the first thing you will eat when we get home?

Salad

What do you wish you had brought with to the island this year?

Dried banana

Avocado

Fruit

Salad

What did you miss most during the year?

People and pets

My family

Swimming

Family, friends and my pets

Where is home for you?

Pretoria

Dutywa, Eastern Cape

Pretoria

Pretoria

What is the second thing you will eat when we get home?

Frozen Yogurt

Strawberries

Sushi

Avo on toast....and eggs

What did you bring that you didn't use?

Summer clothes

Nothing really

Hot water bottle and green cross inner soles

Too many toiletries!

Are you excited for the voyage back? Why?

Yes - Something different
No - No sea legs

Yes: I missed my mom

Yes! The ship is great fun

Yes-we will be going home!
No - seasickness

What is the first thing, besides food, you will buy?

Sun glasses

A phone

Probably petrol

New clothes

Who is waiting for you at the pier?

PE - No one
CT - Parents

Family and some friends

Hopefully friends that live in PE or CT

My mom, dad and sister

What are your plans when we get home?

Travel then work

I don't have the slightest clue

PE toe

Not sure, just want to get settled and then decide



Pierre

What is the first thing you will eat when we get home?

What do you wish you had brought with to the island this year?

What did you miss most during the year?

Where is home for you?

What is the second thing you will eat when we get home?

What did you bring that you didn't use?

Are you excited for the voyage back? Why?

What is the first thing, besides food, you will buy?

Who is waiting for you at the pier?

What are your plans when we get home?



Mpho

Chicken wings

Many USB sticks

Family and friends

Pretoria

Grapefruit

Used everything

Yes, excited to start a new chapter in life

Beard oil

Parents

Travel between friends and family



Nasipi

Muroho na vhuswa

A camera!

Family, friends, home, church

Ngovhela Village, Venda

Hot wings

Most of my clothes

Yes! It takes me home

Nice new undies!

Family

Study, work, catch up!



A.J.

KFC Zinger wings

Crocs

Spending time with my family

Queenstown

My sisters home cooked meal - it's awesome

My wallet

Yes, this would mean that I will see my family soon

Maybe a nice coat

Hopefully my mom

Work for the remainder of the year and study further next year



Apparently there is a nice place in P.E. serving nice burgers

A better camera

Random encounters, with random friends, at random times

I am a new Capetonian

Apparently there is a nice place in CT that is serving nice salads

All the wet wipes in the world as recommended

Yes, boating in the open ocean opens a whole new world for me

Socks and a mop

Hopefully my brother or a taxi or both

Training courses and sorting everything I left overnight



Mike

What is the first thing you will eat when we get home?

What do you wish you had brought with to the island this year?

What did you miss most during the year?

Where is home for you?

What is the second thing you will eat when we get home?

What did you bring that you didn't use?

Are you excited for the voyage back? Why?

What is the first thing, besides food, you will buy?

Who is waiting for you at the pier?

What are your plans when we get home?

Steers burger with salad

An extra pair of legs

Friends, family, rugby

Pretoria

Steers burger with salad

Shaving cream and razors

Yes - feet up and relax
No - going to be sad to leave

Fresh beer and clothes

Someone, I hope!

See friends and family, watch rugby!

Benoit

Avocado on toast

Absolutely nothing

Family and friends

A farm in southern Namibia

A mango

A heap of toothpaste

Yes, it is the last time we'll be together as a team

A draft beer

My gran

Time on the farm and then some travelling

John

Fresh fruit!
Oranges, apples, bananas

Canon 16-35mm L series lens

Family, friends and fat internet

Sedgefield, Western Cape

Eggs, Avo and nice bread

Green cross inner sole

Yes, sleeping, reading, bird watching, relaxing

Hair cut!

Family and friends

Work on Marion photo book

Abu

Mega king steers burger meal

More beverages

Family, friends, sports

Queenstown (The O45)

Fruit salad

Nothing, I used everything

Yes, I'm going home!!

Free beer and clothes

My cousins

Continue my studies



Marius

What is the first thing you will eat when we get home?

What do you wish you had brought with to the island this year?

What did you miss most during the year?

Where is home for you?

What is the second thing you will eat when we get home?

What did you bring that you didn't use?

Are you excited for the voyage back? Why?

What is the first thing, besides food, you will buy?

Who is waiting for you at the pier?

What are your plans when we get home?

Pears and apples, probably all at once

More wine and my girlfriend

See previous question

Marion Island and Cape town

Tinned ham due to longing

The excess of soap

Yep, hacki-sack on the helideck

Probably good wine

Parents, girlfriend, strangers

PhD, SCAR conference, eating salad

Sherwin

A home cooked meal

More shampoo

My pet snake

Wherever my project takes me

Citrus fruits

My surveillance cameras

Yes - Cos it's the voyage back home

A telephone directory

The Gupta chauffeur

Continue to work for the ruling party

Stefan

Good fresh burger

GoPro

Family, friend. Dogs

Pretoria

Fruit

Spur

Ribs

Nothing

Yes, can't wait to get back to a system where supply exceeds demand...lol

What is this buying concept?

PE - No one
CT - Parents-in-law

No one, everyone will be waiting at OR tambo

Visit Botswana or Namibia

Moses

Sphathlo/bunny chow

Coconut crushing machine (joking) a camera

Pretoria

Spur