MECH4950
(Advanced Manufacturing in Practice)

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

Agenda for MECH4950 information seminar on Wed 5th March @ ZOOM

14:00 Administrative info (Ms Kristin Crear)

14:10 Overview and past experiences of MECH4950
(Prof. Kazuhiro Nogita and Dr Xin Fu Tan)

14:50 Q&A

https://uqz.zoom.us/j/82335314048

MECH4950
(Advanced Manufacturing in Practice)

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

New Colombo Plan Mobility Program 2025

Hydrogen Energy in Australia and Japan

- Industry Opportunities for Australia's Future Engineers -

22 students to participate in the short-term mobility program to Japan (22nd June to 20th July 2025).

Australian Government

NEW COLOMBO PLAN
Connect to Australia's future - study in the region

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

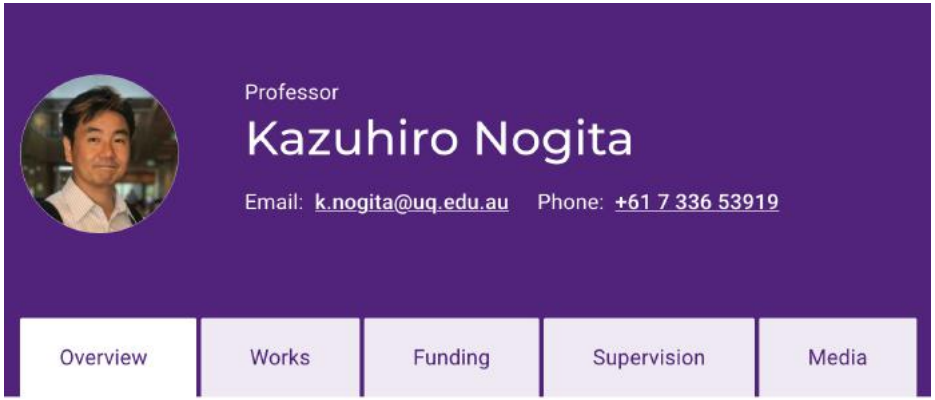
Project Aims

- To provide an opportunity for 22 UQ Engineering students
- The project will consist of 4 weeks stay (Departing 22nd June – Returning 20th July).
- Nihon Superior Co visit and EXSPO2025 visit in Osaka (23rd to 25th June).
- On-site exchange to Kyushu University (KU) and the delivery of two series of lectures in Fukuoka (26th June to 19th July).
- Lecture topics will include Advanced Engineering Technologies with a focus on the Japanese Manufacturing Sector and Japanese Language.
- The Kyushu Economic Federation (KEF) and Fukuoka Strategy Conference for Hydrogen Energy (FSCHE) will facilitate industry involvement and the participation of manufacturing facilities (Nippon Steel, Kyushu Electric Power Co, Namura Shipbuilding Co., HyTReC, J-POWER etc.).

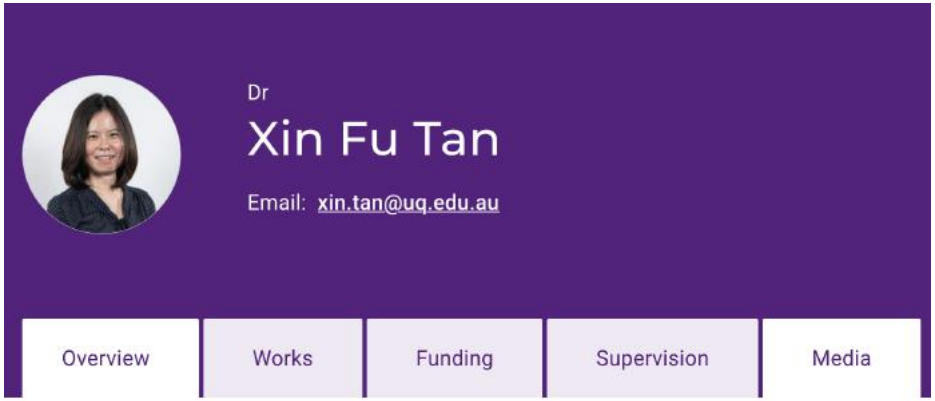
MECH4950 in 2025
(Advanced Manufacturing in Practice)

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

Course coordinator
Lecturer



Lecturer



Course administrator

Kristin Crear
She/Her
BBus/BCI
Supervisor, Student and Academic Administration

School of Mechanical and Mining Engineering
The University of Queensland
Brisbane Qld 4072 Australia

E-mail: studentenquiries@mechmining.uq.edu.au

MECH4950 in 2024
(Advanced Manufacturing in Practice)

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

Assessment summary

Category	Assessment task	Weight	Due date
Participation/ Student contribution	Sustainable Energy for a Better Future	10%	16/05/2024 - 4/07/2024
Presentation	Summary Presentation	30%	12/07/2024 4:00 pm
Paper/ Report/ Annotation	Final Report	60%	29/07/2024 4:00 pm

+ Group Presentation @ KU, and essay for NCP (1-2 pages with photos)

MECH4950 in 2024
(Advanced Manufacturing in Practice)

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

NCP presentation 5:00pm to 6:20pm on Friday 9th Dec 2022 @ Kyushu Uni

Assessor's name:

Presentation Assessment Sheet (MECH4950) Signature:

Group	Group Members	Total (100)	Depth of analysis and demonstration of key concepts and ideas (50)	Structure and timing (15)	Presentation (voice, professionalism, audio-visual, mannerisms) (15)	Handling of questions demonstrates a depth of knowledge (20)
1						
2						
3						
4						
5						

MECH4950 in 2024
(Advanced Manufacturing in Practice)

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

Mark sheet: MECH4950 report (Page 1)

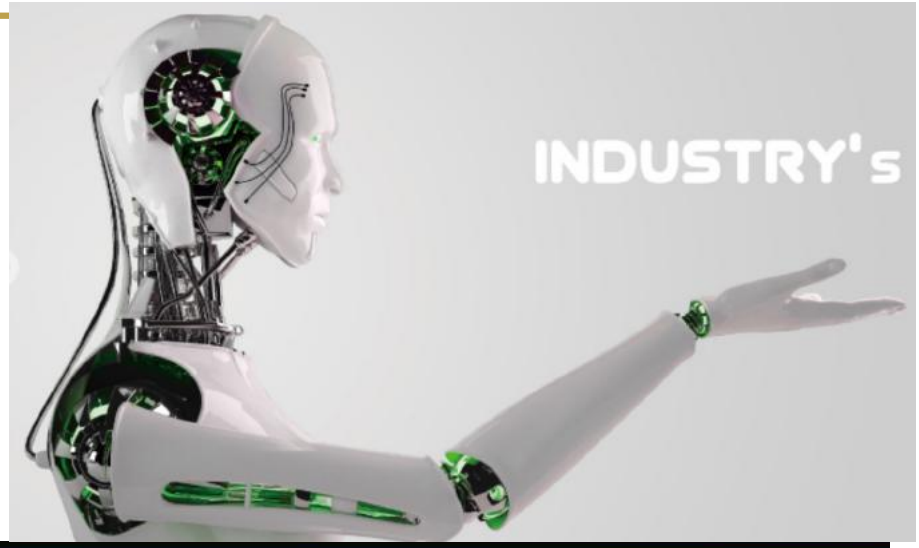
Student Name:			**Student Number:**		**Marker:**	
Grade Band	**Definition and scope (10%)**		**Background (20%)**		**Evaluation of Manufacturing in Japan and Academic and Professional Engineering Practice (50%)**	
Excellent (85-100%)	Excellent, clear definition of the topic and scope. A suitable abstract that accurately yet concisely captures the topic and outcomes of the NCP travel.	10 9	Extensive, relevant and logically organised review, analysis, discussion of background material. Both specific research and general theory, helps the reader understand the rest of the document. Demonstrates clear mastery of the material in the topic area and ability to synthesize and abstract knowledge.	20 18 17	Excellent synthesis of background material and ideas and learning that occurred during the NCP travel to evaluate the key concepts outlined in the learning objectives. There is a clear depth to the report that demonstrates the creation and/or comparison of ideas in a concise fashion.	50 46 43
Very Good (75-84%)	Very good definition of the topic and scope. The abstract accurately captures the topic, and outcomes of the NCP travel.	8	Relevant and logically organised review, analysis, discussion of background material. Both specific research and general theory, helps the reader understand the rest of the document. Demonstrates mastery of the material in the topic area and ability to synthesize and abstract knowledge.	16 15	Very good synthesis of background material and ideas and learning that occurred during the NCP travel to evaluate the key concepts outlined in the learning objectives. There is a depth to the report that demonstrates the creation and/or comparison of ideas.	42 40 38
Good (65-74%)	Good definition of the topic and scope. The abstract captures the topic and outcomes of the NCP travel.	7	Good review/discussion of background material. Both specific research and general theory are presented. Shows good understanding of the material in the topic area and ability to synthesize and abstract knowledge.	14 13	A good synthesis of background material and ideas and learning that occurred during the NCP travel to evaluate the key concepts outlined in the learning objectives. There is some depth to the report that demonstrates the creation and/or comparison of ideas.	37 35 33
Satisfactory (50-64%)	Satisfactory definition of topic and scope. The abstract satisfactorily captures the topic and outcomes of the NCP travel.	6 5	Acceptable coverage of background material. Both specific research and general theory are presented. Shows basic understanding of the material in the topic area.	12 11 10	A satisfactory synthesis of background material and ideas and learning that occurred during the NCP travel to evaluate the key concepts outlined in the learning objectives.	32 28 25
Poor (25-49%)	Poor or incomplete definition of topic and scope. The abstract is not clear about the topic and the outcomes of the NCP travel.	4 3	A limited coverage of background material, which perhaps does not cover both specific research and general theory. Flaws in the basic understanding of the material in the topic area are evident.	9 8 7 6 5	A poor attempt has been made at synthesising the background material and ideas and learning that occurred during the NCP travel to evaluate the key concepts outlined in the learning objectives. The report is more a chronological account of the trip with little evidence that new ideas were considered/generated.	24 22 18 15 13
Very Poor (0-24%)	Topic and scope are very unclear. The abstract does not summarise the report topic and outcomes or there is no abstract.	2 1 0	An extremely limited coverage of background material is included. There is an apparent lack of understanding of the material in the topic area.	4 2 0	Limited or no connection is evident between the background material and ideas and learning that occurred during the NCP travel to evaluate the key concepts outlined in the learning objectives.	12 6 0

Report due at 5:00pm on Monday 19th Dec 2020 via Blackboard

Nihon Superior (NS) in Osaka
Osaka EXPO2025

Nihon Superior in Osaka

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

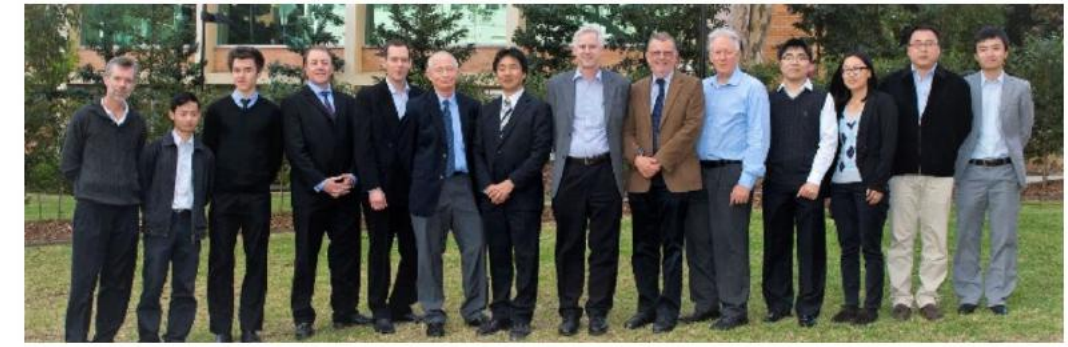


NIHON SUPERIOR

CENTRE FOR
THE MANUFACTURE OF
ELECTRONIC MATERIALS

NS CMEM is funded from July 2012 to June 2025. Professor Kazuhiro Nogita is the founding director of NS CMEM

Mr. Akimoto
Former Japanese Ambassador to Australia

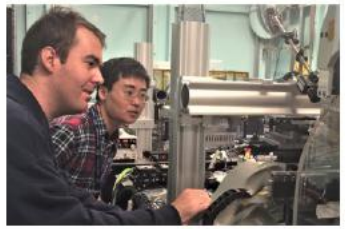


NIHON SUPERIOR
CENTRE FOR
THE MANUFACTURE OF
ELECTRONIC MATERIALS

Nihon Superior Centre for the Manufacture of Electronic Materials

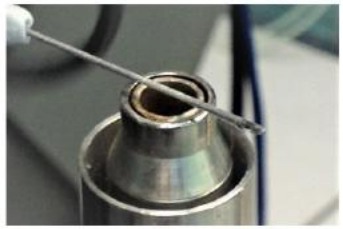
The Nihon Superior Centre for the Manufacture of Electronic Materials (NS CMEM), as part of the School of Mechanical and Mining Engineering at The University of Queensland, has been established with the purpose of bringing world-class research capability to the manufacture of electronic materials.

Research



Facilities

Publications



NS CMEM Links

- School of Mechanical & Mining Engineering
- Faculty of EAIT
- Nihon Superior Japan
- Kyushu University
- University Malaysia Perlis (UniMAP)
- UQ-KU Project
  - English
    - Newsletters
  - Japanese

Mr. Kusaka
Japanese Ambassador to Australia

www.uq.edu.au/news

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

uqnews

ISSUE 555 JULY 2006

TAKING THE LEAD ON TOXIC POLLUTION

Reducing the toxic pollution of landfill sites from lead in the circuits of dumped electronic equipment is the aim of a research agreement between the University and a major Japanese metals company.

UQ and Nihon Superior Company Limited have entered a three-year research alliance to continue developing a revolutionary alloy technology discovered by the company's chief executive Tetsuro Nishimura.

The technology provides an environmentally-friendly alternative to lead solder currently used in circuitry.

Millions of outdated computers and other electronic components with circuitry joined by lead solder are buried in landfill sites worldwide each year, with the amount set to soar.

With heavy metal toxins such as lead leaching into the ground, many governments, led by the European Union, are banning the use of hazardous substances in electronic equipment.

UQ Associate Professor Arne Dahle and Dr Kazuhiro Nogita from the Division of Materials Engineering have consulted with Nihon Superior on lead-free solders for the electronics industry for two years.

The work has been coordinated by their Materials Engineering colleague Dr Jeff Gates and UQ Materials Performance researchers.

"We have been able to provide detailed knowledge about Nihon Superior's alloys, and so have strengthened its patented technology," Dr Dahle said.

Participants at the signing of the research agreement between Nihon Superior and UQ

The UQ solidification group headed by Dr Dahle was identified by Nihon Superior as the best in the world in this area.

Their research has for the first time involved documenting in detail the solidification mechanisms in the revolutionary alloys and the reason for their superior soldering behaviour.

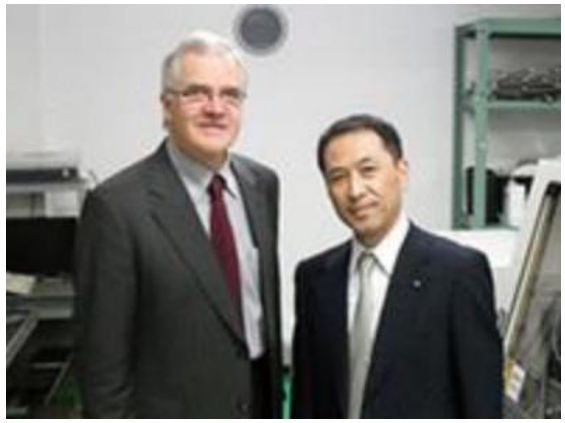
"With cash funding of more than $450,000 plus additional provisions of resources such as equipment, material and exchanges, we are confident this work will ultimately lead to the discovery and development of even better lead-free solders for the future," Dr Dahle said.

University of Queensland Delegation Visits Nihon Superior Co. Ltd.

8th November 2011 **Source:** Nihon Superior Company Limited

Posted By : ES Admin

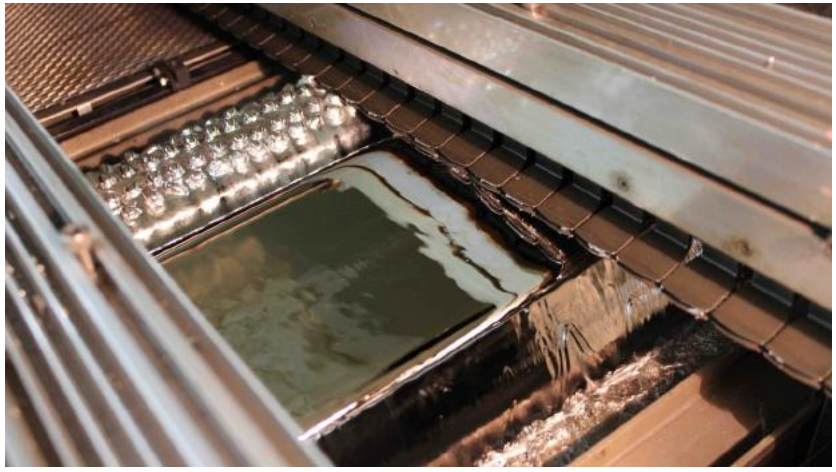
Nihon Superior was honored to receive a visit by a delegation from the University of Queensland on October 7, 2011. Senior Deputy Vice-Chancellor Professor Michael Keniger was accompanied by Deputy Vice-Chancellor (International) Anna Ciccarelli, Ph.D., Deputy Director Global Engagement, Michelle Allan, Associate Professor and Principal Research Fellow, Mechanical and Mining Engineering Department, Dr. Kazuhiro Nogita and Business Development Officer, Global Engagement, UQ International, Darren Wise.

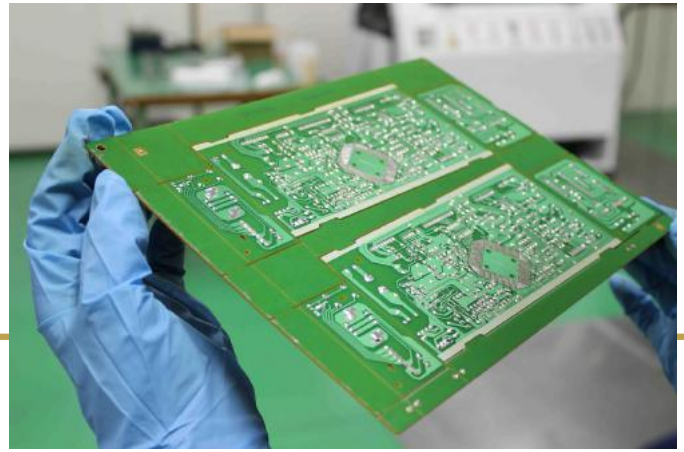


Prof Keniger, UQ Senior DVC and Dr Nishimura, President of NS

Nihon Superior R&D centre in Toyonaka

Wave Soldering





THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

Surface Mount Assembly for reflow soldering

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

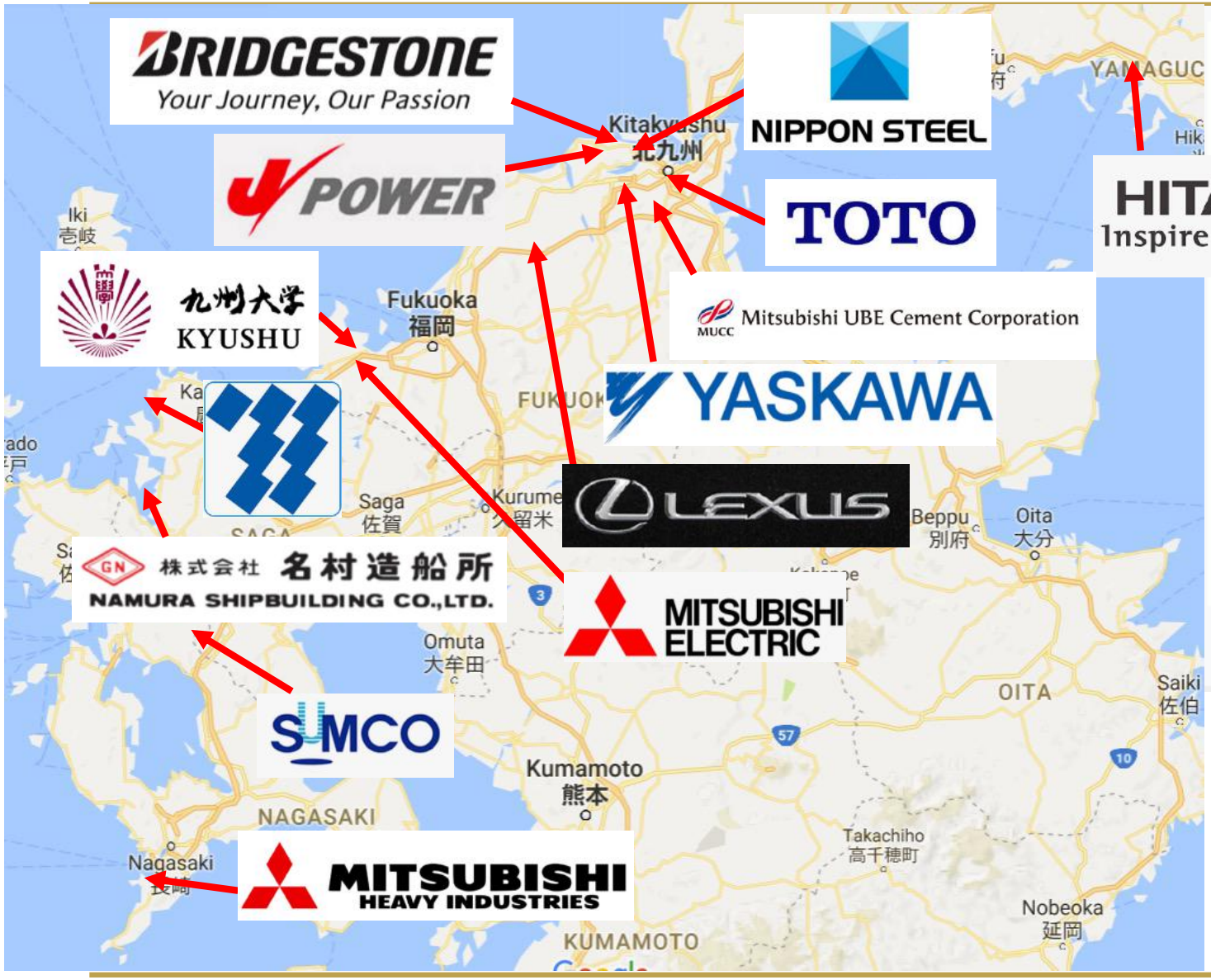
Osaka EXPO2025

Osaka EXPO2025

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

NCP 2017-2024

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA



Kyushu region of Japan and the current prefectures on the island of Kyushu

MECH4950 in 2022
(Advanced Manufacturing in Practice)

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

2022 UQ-JPIE (Japan Program for Industry Experience) ※Tentative

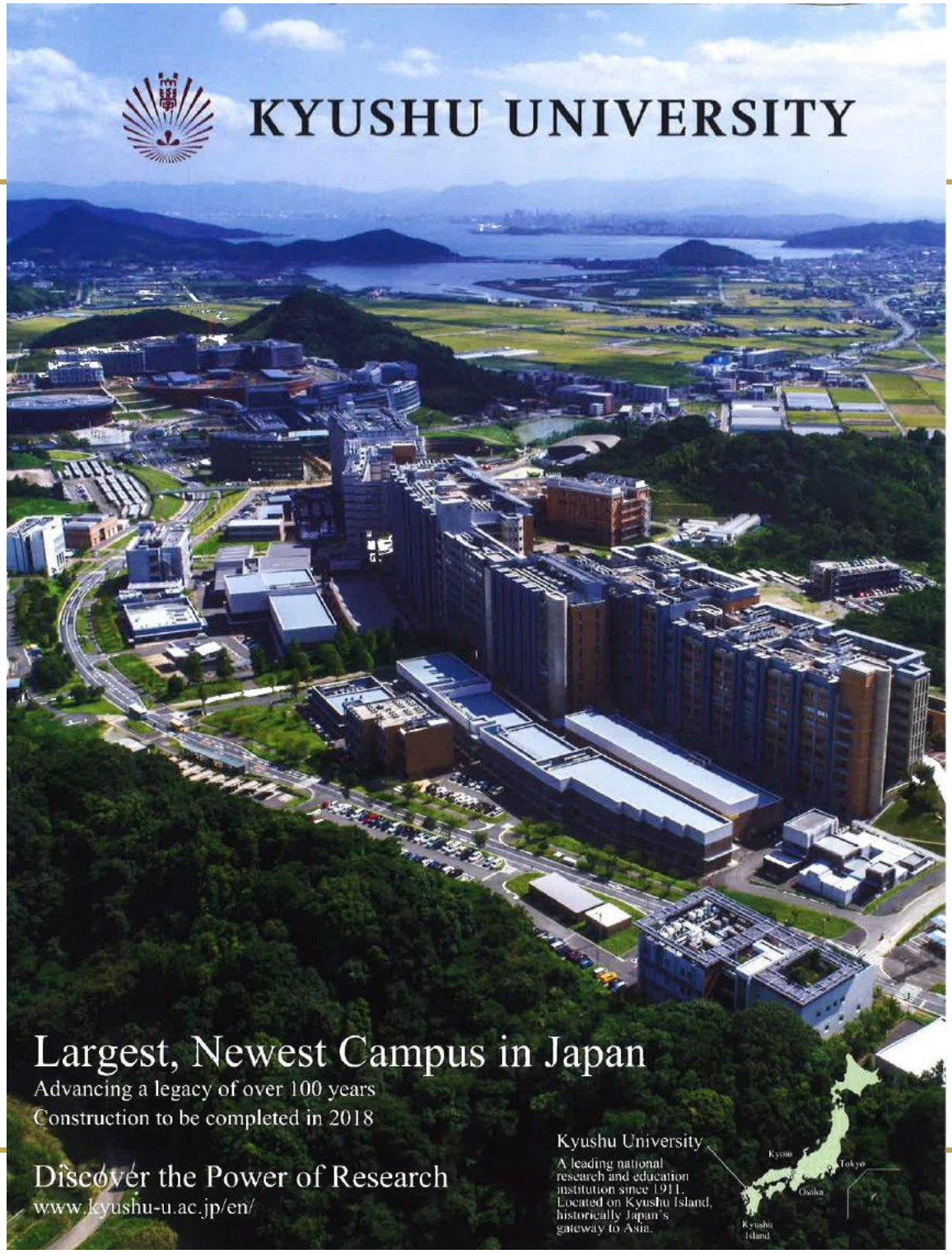
As of 12/10/2022

	28 November (Mon)	29 November (Tue)	30 November (Wed)	1 December (Thu)	2 December (Fri)	3 December (Sat)	4 December (Sun)
08:40-10:10		WLR① (Steel) 【W4,#420 Meeting Room 1】 Prof.Ko-ichiro Ohno /Prof. Masaki Tanaka **9:00-10:30**	**Factory Tour** **NIPPON STEEL CORPORATION** **10:00-12:00** **Hibikinada area demonstration field** **Support: Kitakyushu Power Co., Ltd.** **14:00-14:45**	WLR③ (Naval Architecture and Ocean Engineering) 【W4,#420 Meeting Room 1】 Prof. Koji Gotoh	**Factory Tour** **Fukuoka City Chu-bu sewage treatment center & Hydrogen Station** **10:00-12:00** **HyTReC** **15:00-17:00**	**Free time**	**Free time**
10:30-12:00	**Opening Ceremony** **11:00-11:30** 【Nakayama Hall,Jonathan KS Choi Cultural Centre of Japan】 **Lunch Time** **11:45-12:45** 【Nakayama Hall,Jonathan KS Choi Cultural Centre of Japan】	LT① (Steel) Prof. Masaki Tanaka / Prof.Ko-ichiro Ohno **10:30-12:00**		WLR④ (Earth Resources Engineering) 【W4,#420 Meeting Room 1】 Associate Professor. Takashi Sasaoka			
12:00-13:00		Lunch Time		Lunch Time			
13:00-14:30	**Plenary Lecture** **13:15-14:15** <Mr. Trevor Holloway> Australian Consul-General in Osaka 【Multipurpose Hall, Guest House】	WLR② (OPERA) Prof. Chihaya Adachi 【Room: COI Seminar Room No.332】 **13:30-15:00**		Japanese Industries ① 【W4,#420 Meeting Room 1】 Prof. Masamichi Kohno			
14:50-16:20	**Orientation** **14:30-14:45** 【Multipurpose Hall, Guest House】 **Campus tour with KU students** **14:45-16:20** 【Multipurpose Hall, Guest House】	LT ② (OPERA) Prof. Chihaya Adachi **15:00-16:00**					
16:40-18:10	**Meeting with the KU buddy** 【W4, Information Study Room 1】 **16:40-18:10**						

	5 December (Mon)	6 December (Tue)	7 December (Wed)	8 December (Thu)	9 December (Fri)	10 December (Sat)	11 December (Sun)
08:40-10:10	Japanese Industries ② 【W4,#420 Meeting Room 1】 Prof. Schröder Martin	**Factory Tour** **Kyushu Electric Power Co., Inc.** **10:00-12:00** **Namura Shipbuilding Co., Ltd.** **14:30-16:30**	WLR⑥ (Robotics) 【W3,#415 Meeting Room 2】 Prof. Kazuo Kiguchi	JBC① 【W4,#420 Meeting Room 1】 Prof. Natalie Konomi	WLR⑧ (Research Institute of Advanced Electric Propulsion Aircrafts) 【W2,#617,Seminar room】 Prof.Hiroshi Miyazaki Assoc. Prof. Andreas Themelis	**Free time** **Transport to Fukuoka airport**	
10:30-12:00			LT ④ (Robotics) Prof. Kazuo Kiguchi **10:30-11:30**	WLR⑦ (Ultramicroscopy Research Center) 【W4,#420 Meeting Room 1】 Prof. Kazuhiro Yasuda	LT ⑧ (Research Institute of Advanced Electric Propulsion Aircrafts) Prof.Hiroshi Miyazaki Assoc. Prof. Andreas Themelis		
12:00-13:00	Lunch Time		Lunch Time	Lunch Time	Lunch Time		
13:00-14:30	WLR⑤ (I2CNER) 【I2CNER Conference Room 217-218】 Assoc. Prof. Aleksandar Staykov **13:30-15:00**		LT⑤ (Wind Tunnel) Associate Professor. Hideaki Ogawa **13:00-13:30**	LT⑥ (Hydrogen Station HY30) **13:30-14:30**	JBC② 【W4,#420 Meeting Room 1】 Prof. Natalie Konomi		
14:50-16:20	LT③ (I2CNER) Assoc. Prof. Aleksandar Staykov **15:00-15:45**			LT ⑦ (Ultramicroscopy Research Center) Prof. Kazuhiro Yasuda			
16:40-18:10	Tea Ceremony club ※Tentative			Calligraphy club (Extracurricular Activities Facility Ⅱ Japanese-style room) **17:00-18:00**	**UQ-KU Workshop & Closing Ceremony** **17:00-18:20** 【Shikihall Lecture Room 2】 **Farewell Party** **18:30-20:00** 【Itn-ito Restaurant】		

ERC : Engineering Course

WLR: World-leading Research Hydrogen, Wind, Nuclear Energy	LT: Lab Tour	Japanese Industries	JBC: Japanese Business Communication	Plenary Lecture



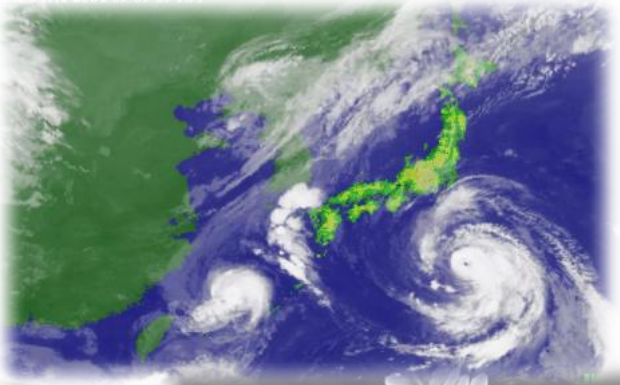
THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

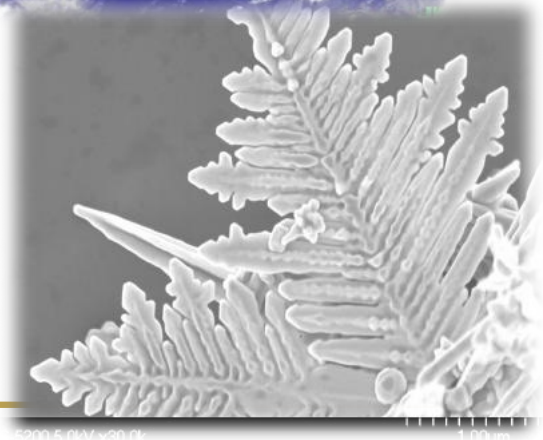
Engineering Education at Kyushu University

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA





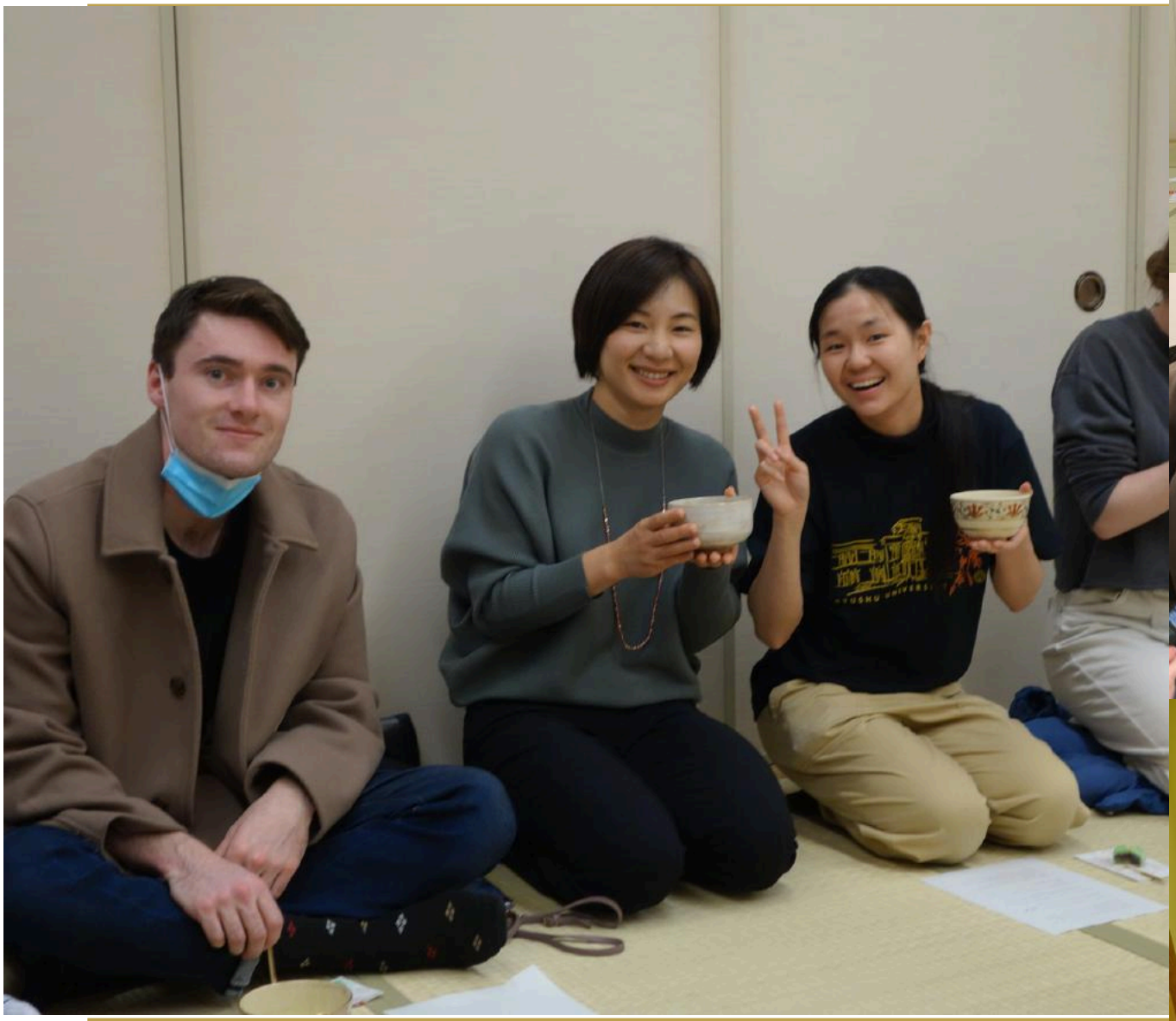


Buddy system at Kyushu University

Kyushu University Shodo club

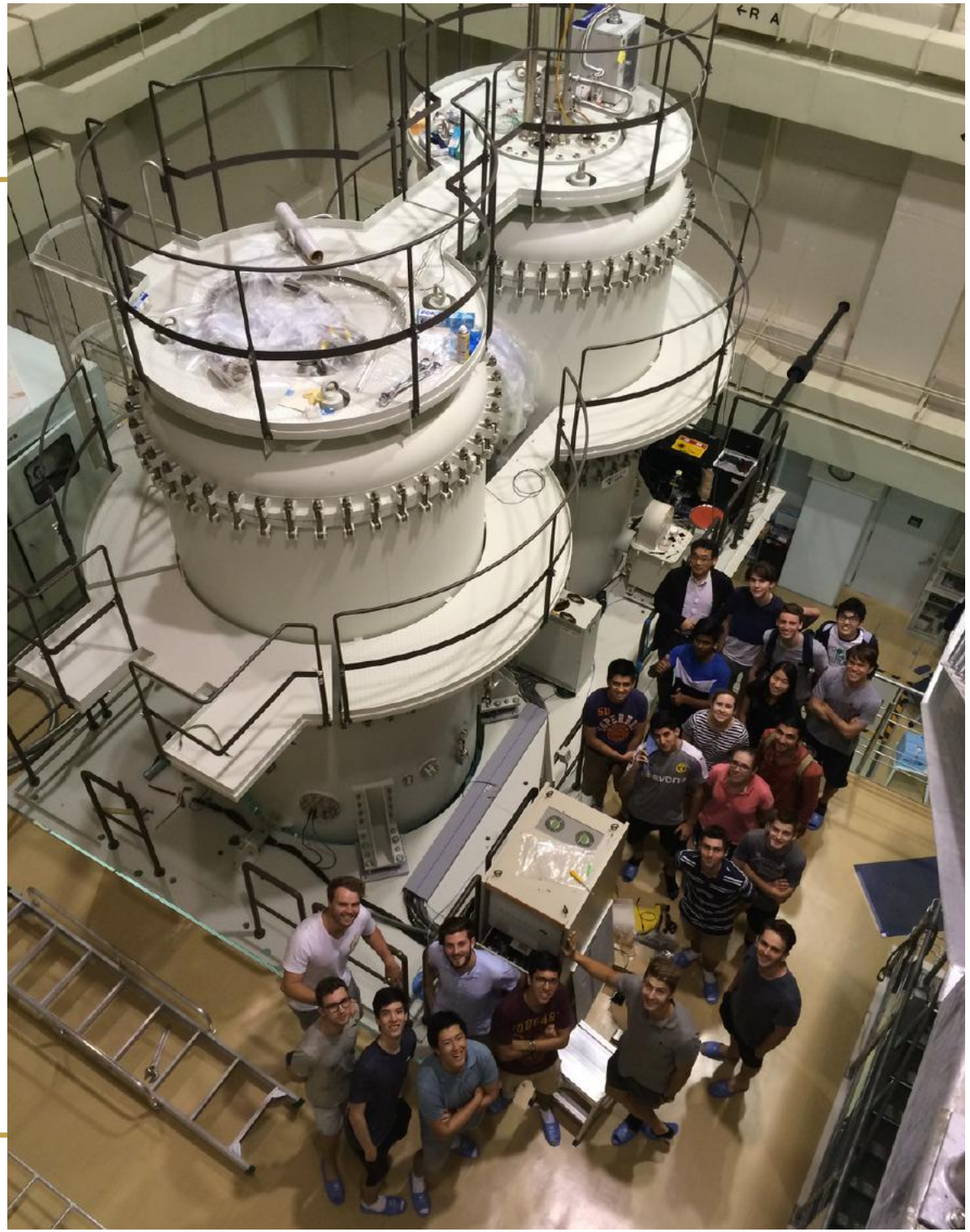
Kyushu University Tea Ceremony Club



World-leading Research
OPERA

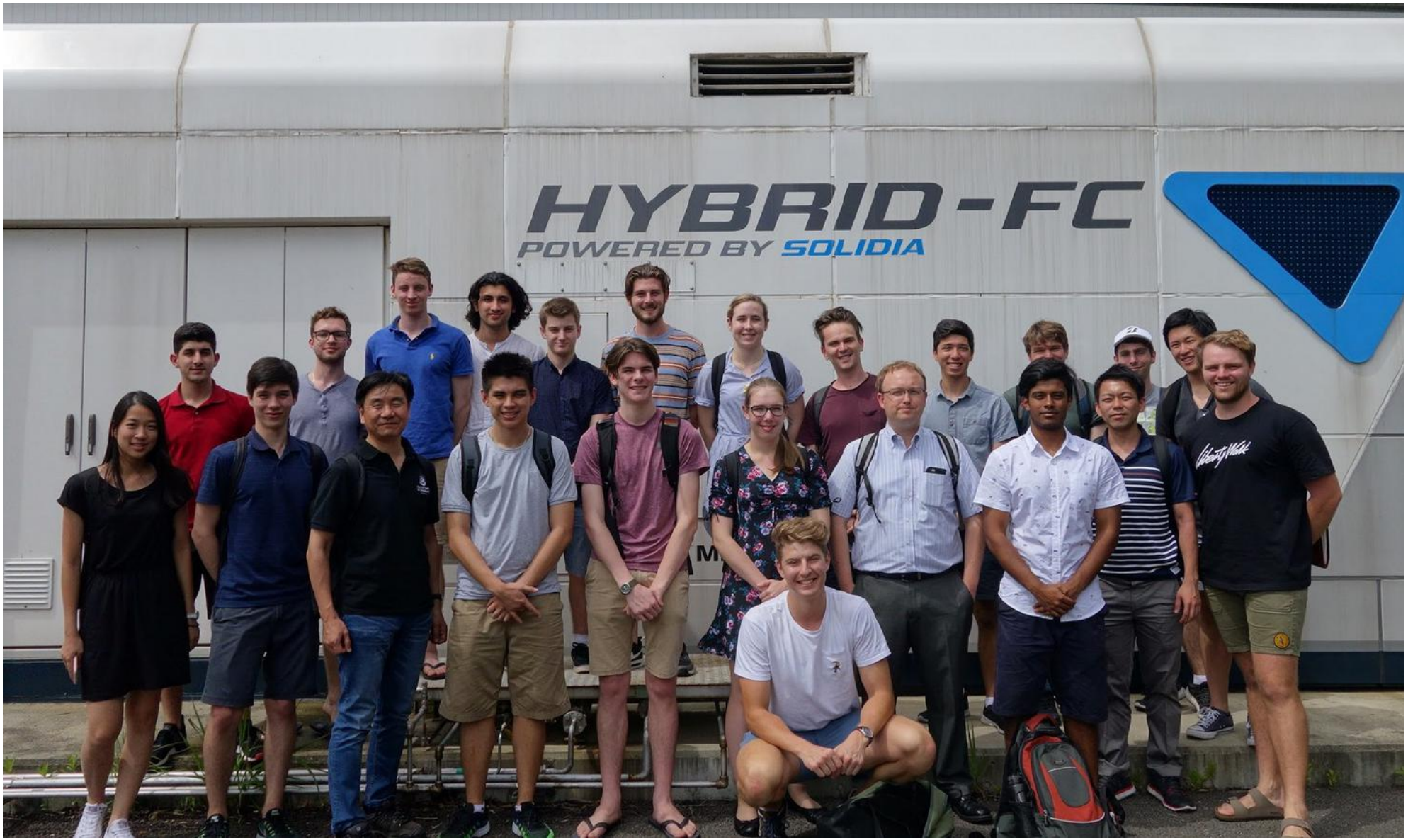
Prof. Chihaya Adachi

World-leading Research
The Ultramicroscopy Research Center



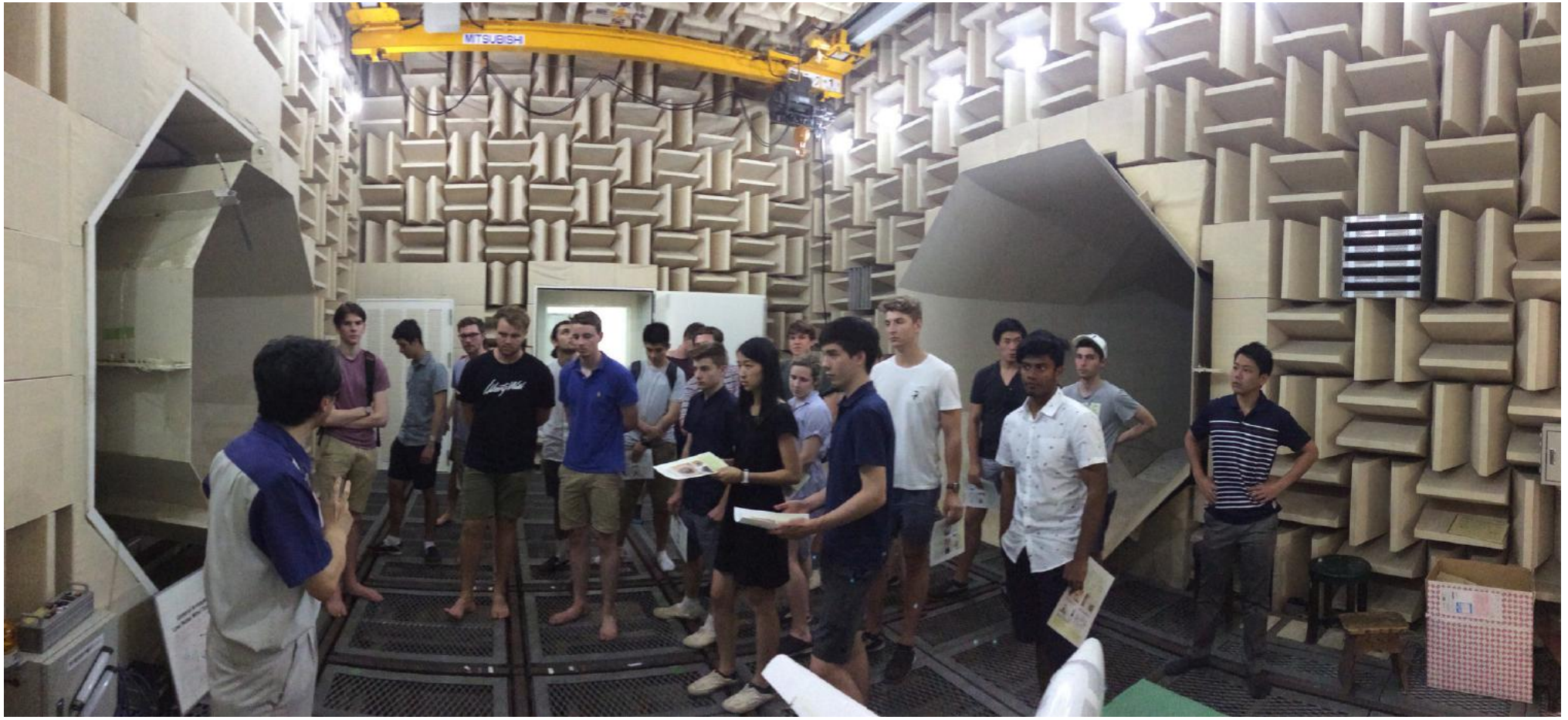
Prof. Kazuhiro Yasuda

World-leading Research
I2CNER



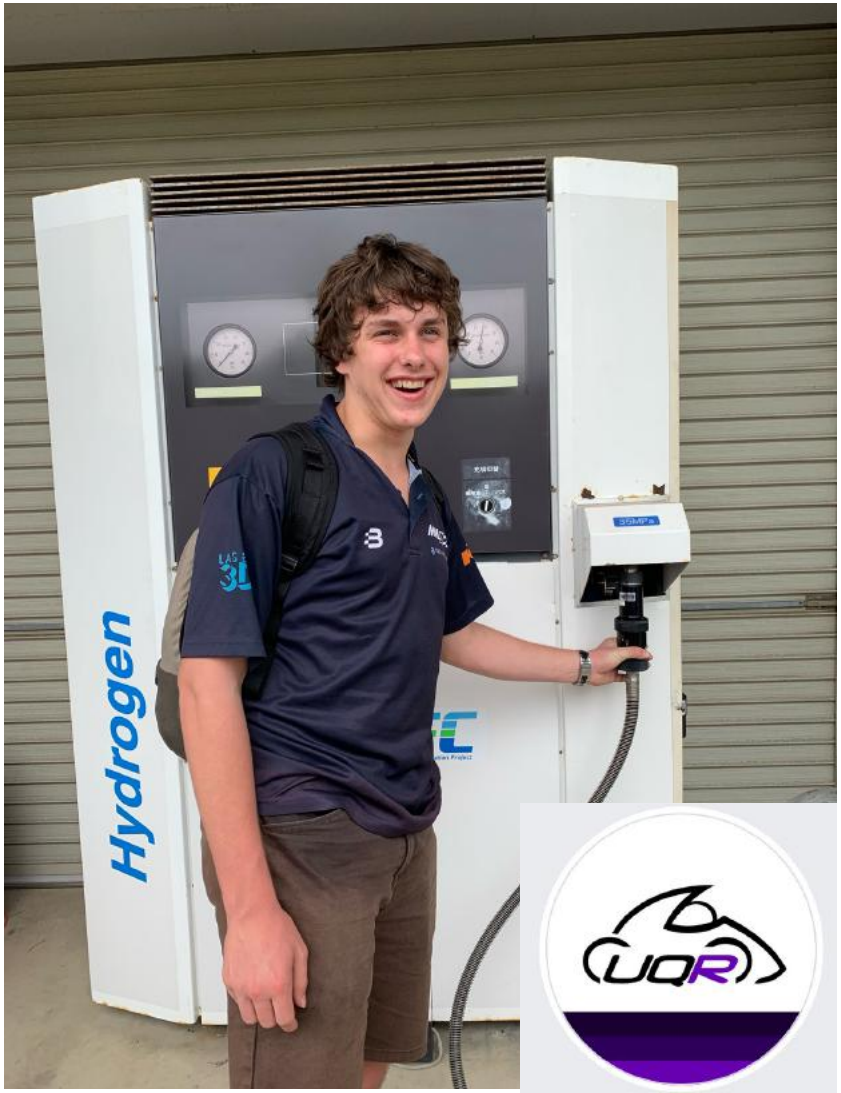
Prof. Stephen M. Lyth

World-leading Research
Recent study on the Space Transportation System



Prof. Hideaki Ogawa

九州大学
KYUSHU

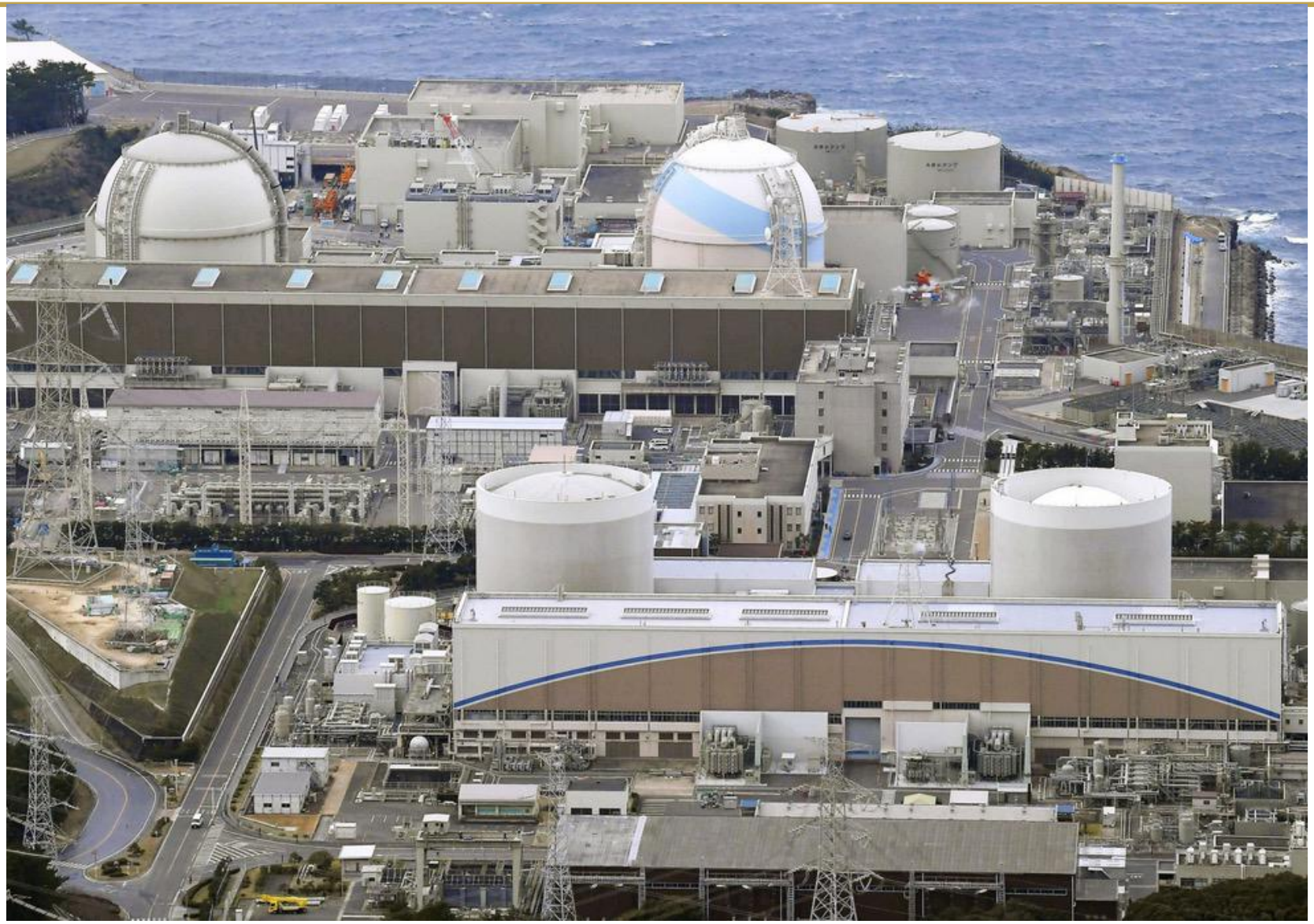


Mr Jackson Geritz (UQ Racing Team)
with Hydrogen

HyTReC (The Hydrogen Testing and Research Center)

https://www.hytrec.jp/pdf/hytrecEnglish.pdf

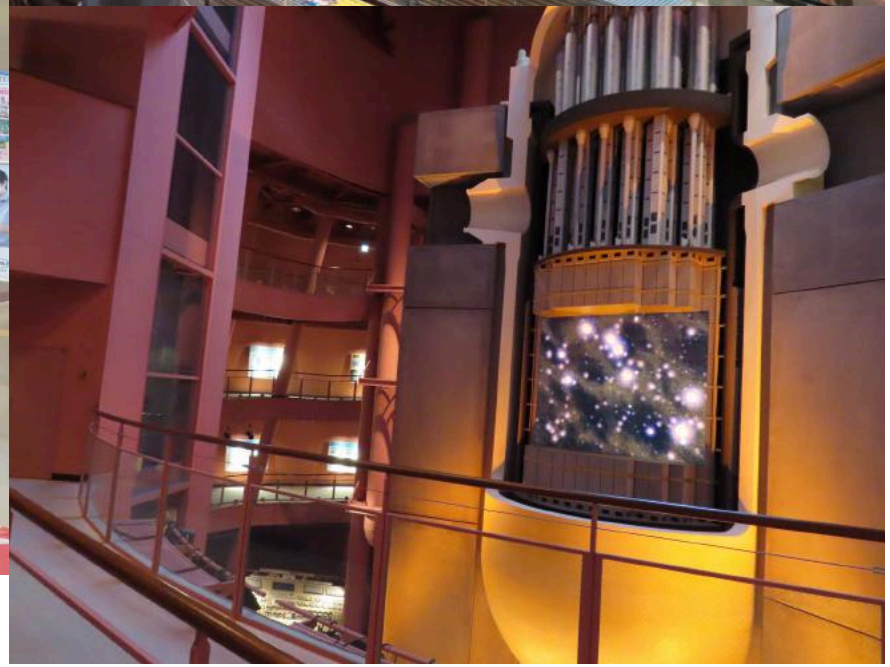
Genkai Nuclear Power Station (Genkai Energy Park)



https://www.kyuden.co.jp/english_index.html

Genkai Nuclear Power Station (Genkai Energy Park)

https://www.kyuden.co.jp/english_index.html



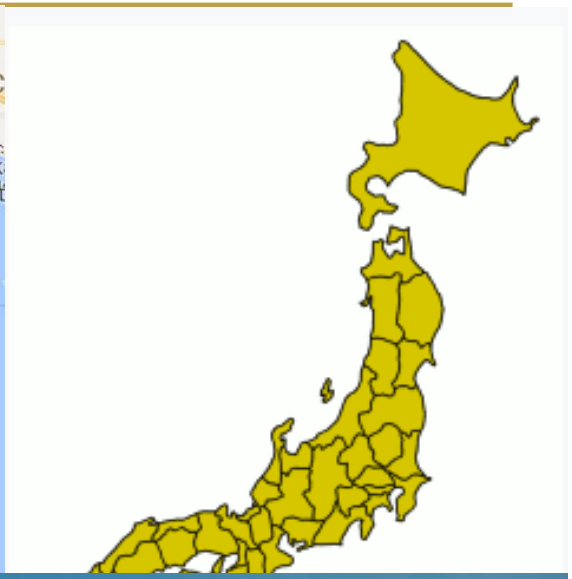
Namura Shipbuilding Co.

https://www.namura.co.jp/en/index.html

Industries in North Kyushu Island

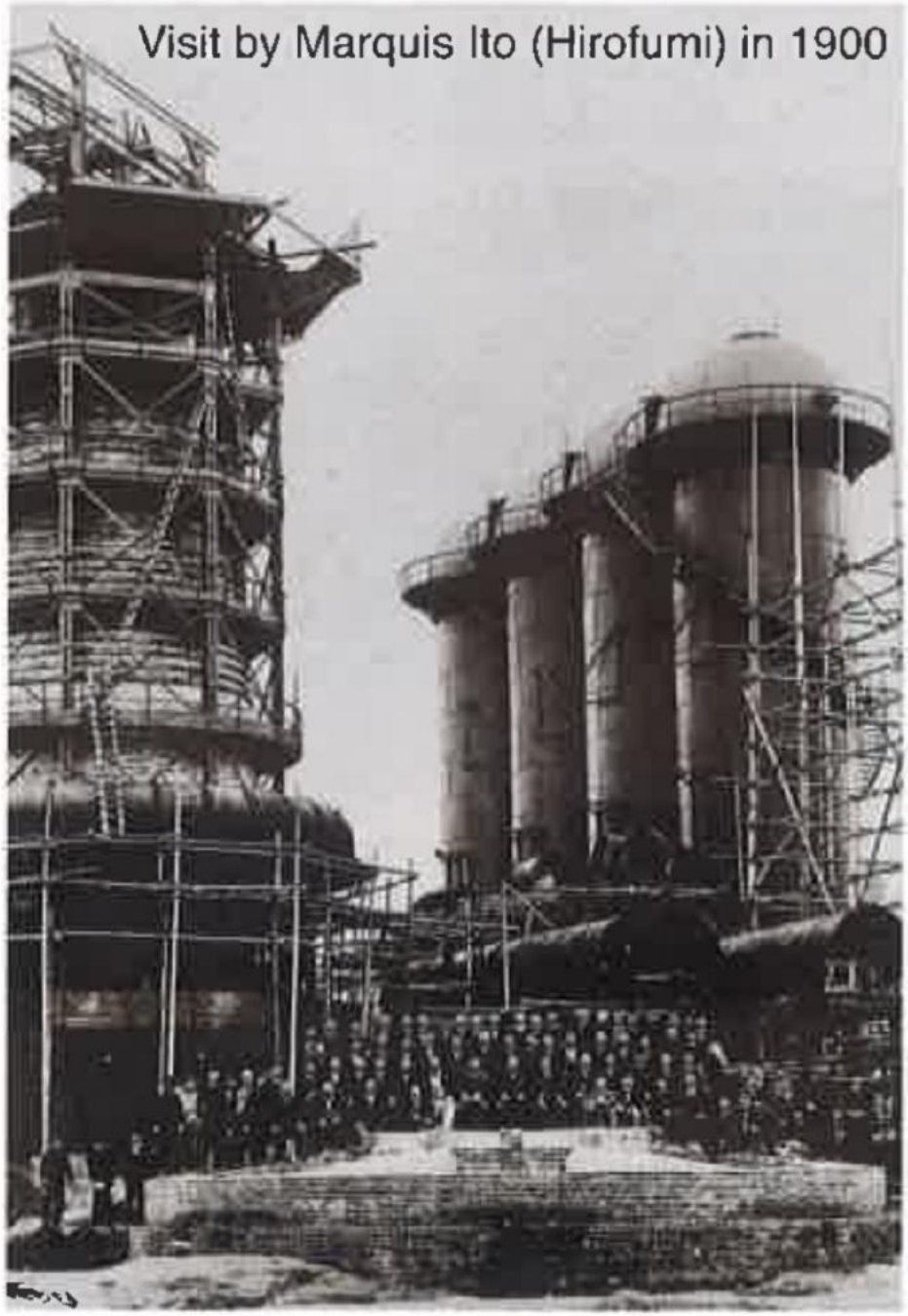
THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

NIPPON STEEL



NIPPON STEEL

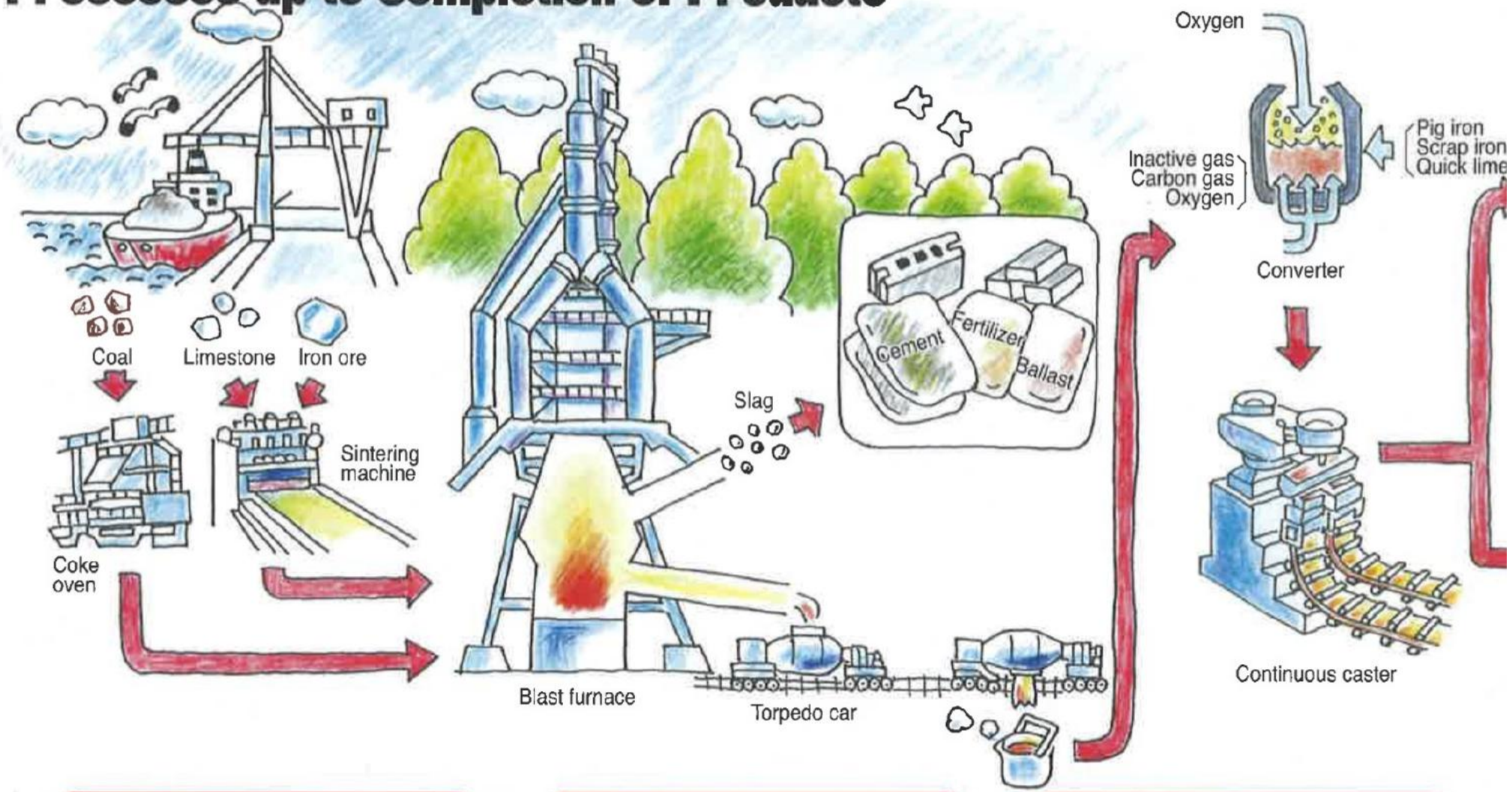
THE UNIVERSITY OF QUEENSLAND
AUSTRALIA



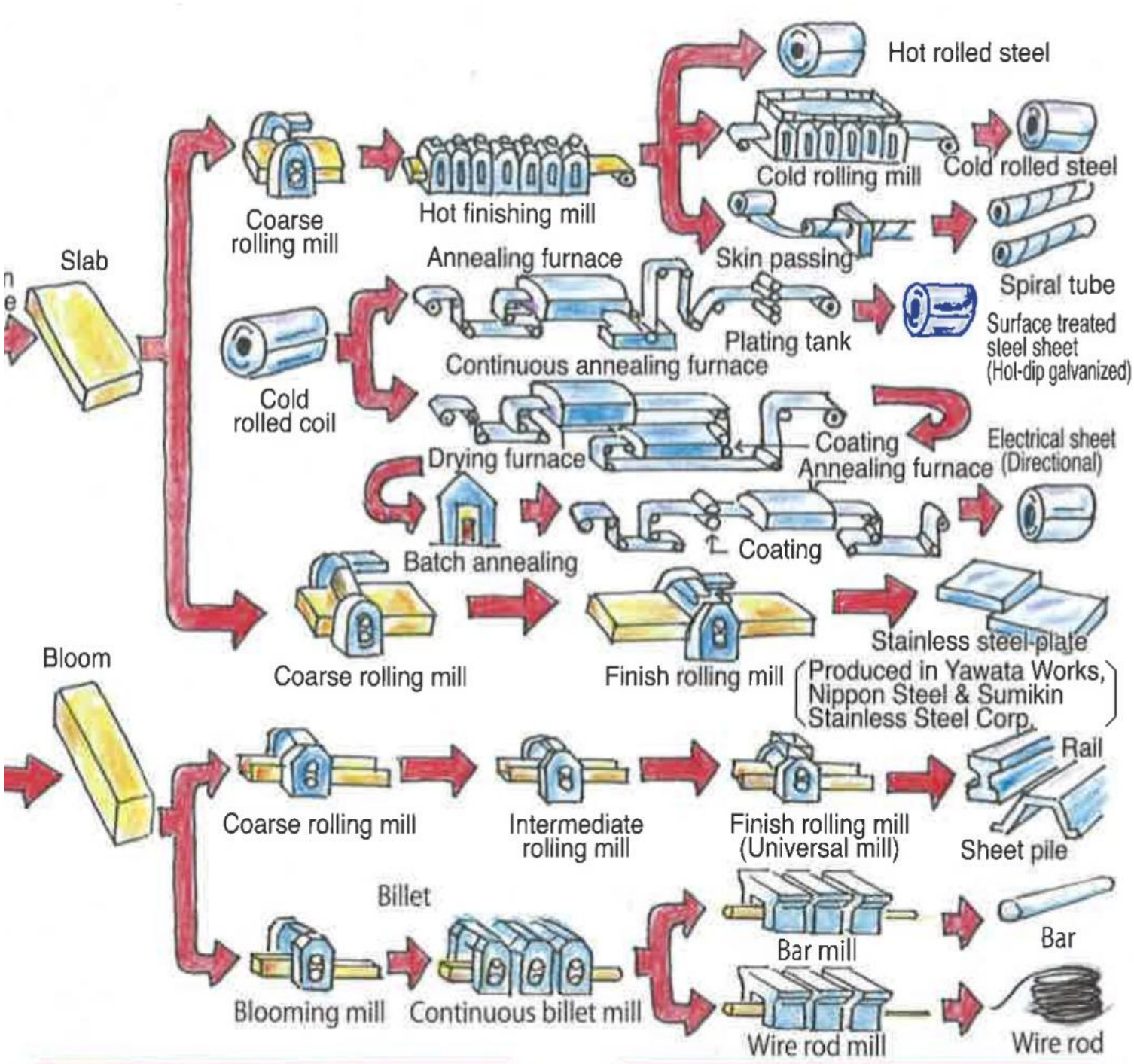
Chronology of Yawata Works

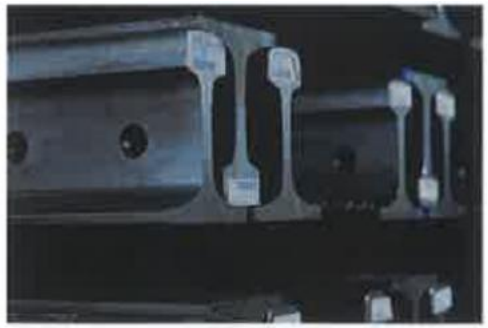
1896	Government announced decision to build iron and steel works in Yawata (March 29)
1897	A Yawata Steel Works office was opened in Yahata Village, Onga-gun, Fukuoka Prefecture. (June 1)
1901	The state-owned Yawata Steel Works began operation. Higashida blast furnace was blown in. (Feb. 5) Operation of a rail & shape mill started. (Nov. 16) The start ceremony of operation was held. (Nov. 18)
1930	Kukioka blast furnace was blown in. (June 17)
1934	Japan Iron & Steel Co., Ltd was founded due to consolidation of iron & steel companies (six companies including Yawata Steel Works). (Feb. 1)
1950	Japan Iron & Steel Co., Ltd was divided into four companies by the Law for the Elimination of Excessive Concentrations of Economic Power; Yawata Iron & Steel Co., Ltd. was formed. (April 1)
1959	Tobata balst furnace was blown in. (Sept. 1)
1970	Nippon Steel Corporation was formed. (March 31)
1988	Shift to the new production system (One-blast furnace operation, receipt of semi-finished products lotted out, etc.)
1998	No. 4 blast furnace began operation in place of No. 1. (No. 1 blast furnace closed.)
2002	Waste Plastics Recycling Facility began operation. (April 1)
2003	Integration of stainless steel business with Sumitomo Metal Industries (launching of Nippon Steel & Sumikin Stainless Steel Corporation (NSSC))

Processes up to Completion of Products



Unloading berth | Iron-making | Steelmaking





●Rails

●New bullet train

●Steel sheet

●Automobile

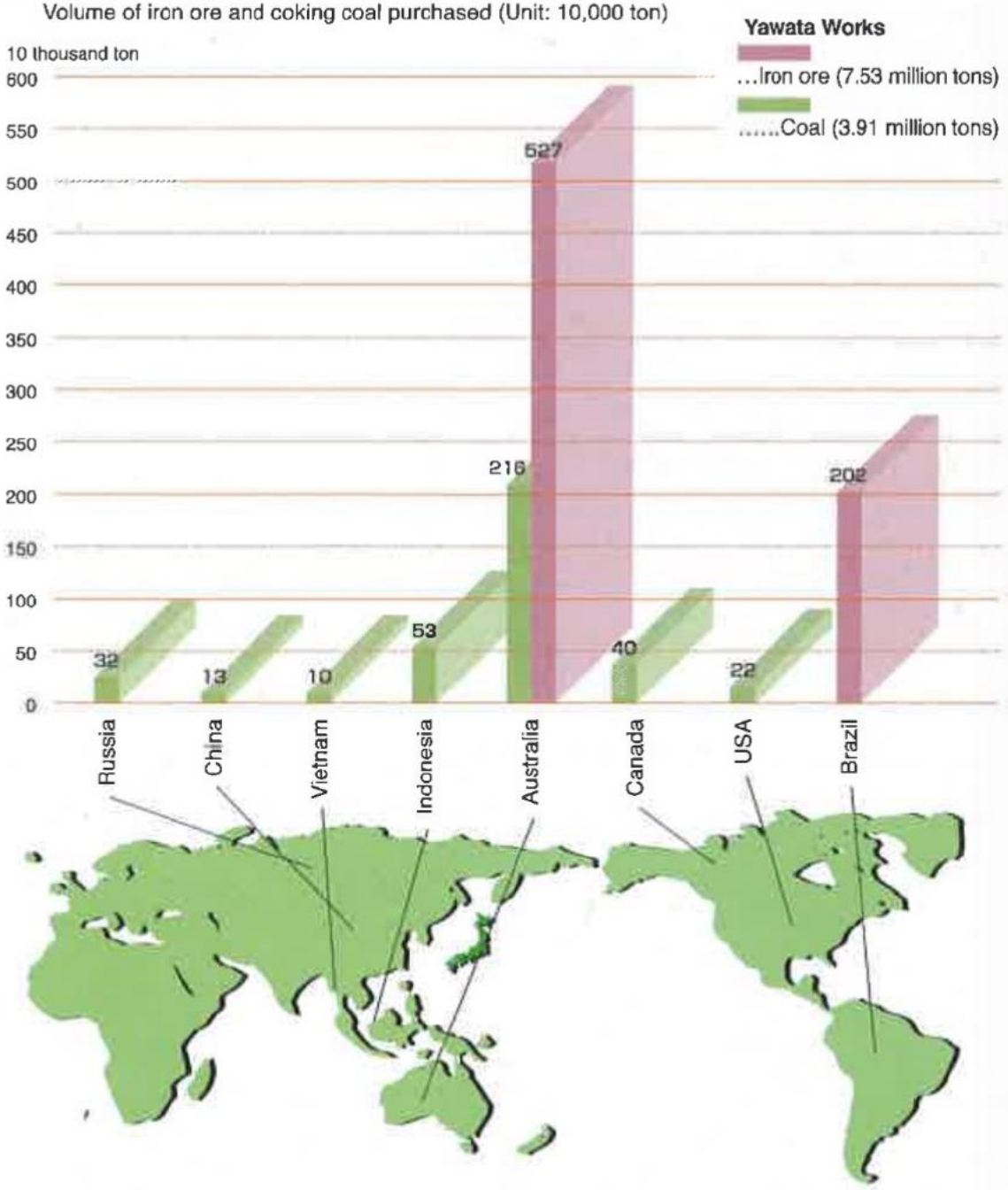
Rolling

Treatment and processing

Receipt of raw materials

■Conditions of raw materials As of 2015

Volume of iron ore and coking coal purchased (Unit: 10,000 ton)



■What are needed to produce one ton of iron?

Iron ore	1.6 tons
Coke	0.5 ton
Limestone	0.1 ton
Others	0.08 ton
Total	2.2 tons

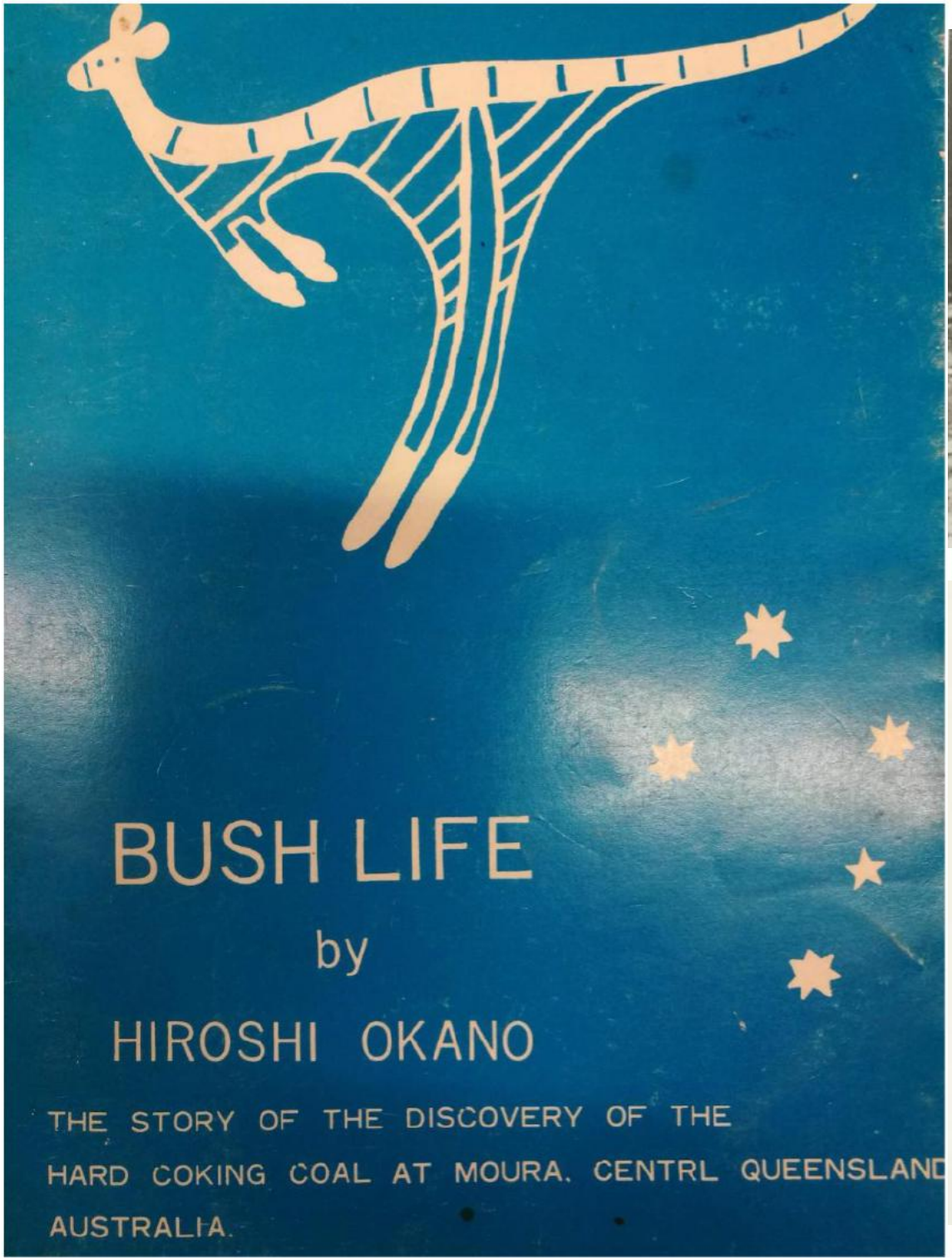
■Iron usage in various structures/products

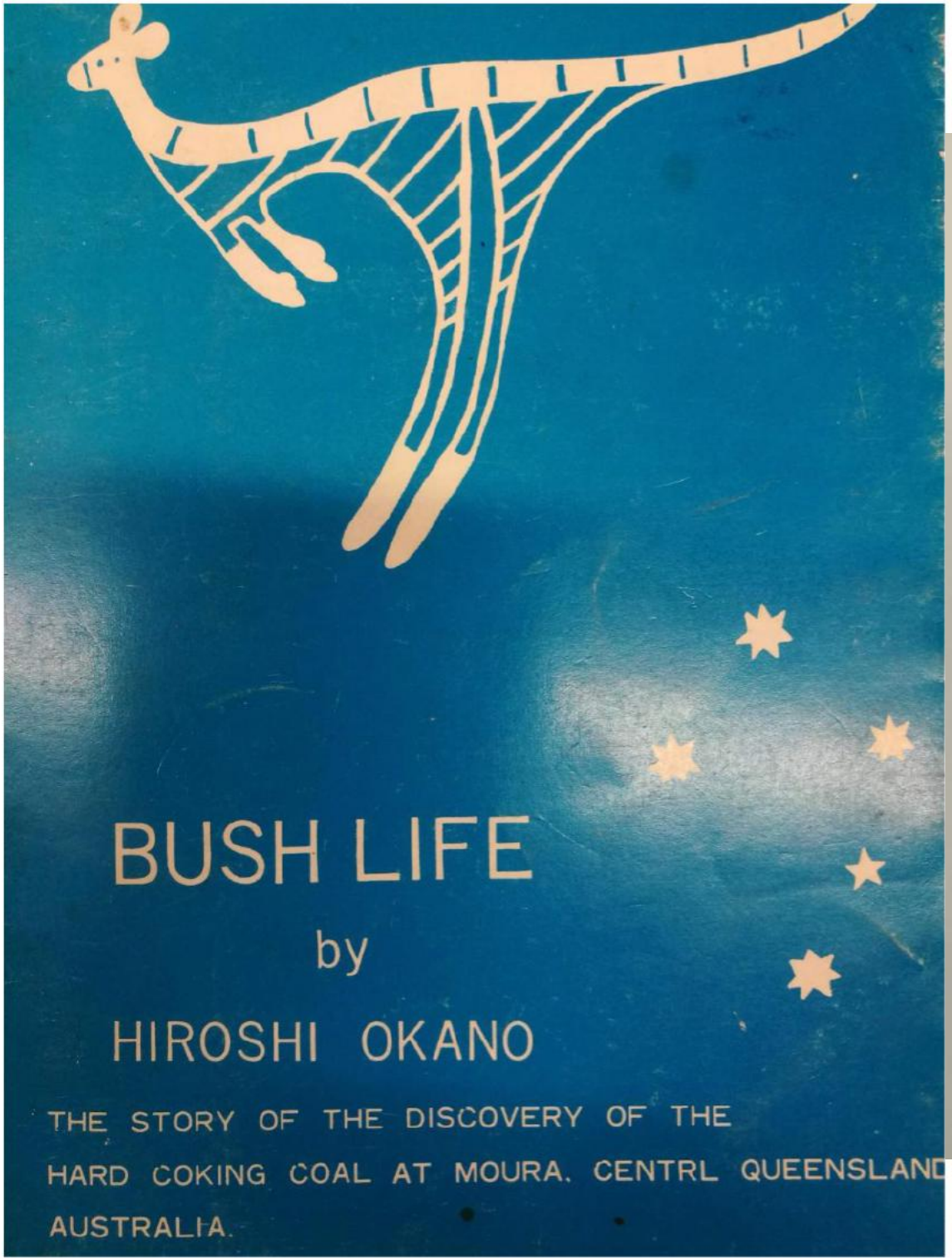
Tomei Expressway	550,000 tons
New Tokyo International Airport	400,000 tons
Tokyo Sky Tree	40,000 tons
Kanmon Bridge	30,000 tons
Wakato Bridge	28,000 tons
Tokyo Dome	2,600 tons
Automobile	900 kg
Refrigerator	25 kg

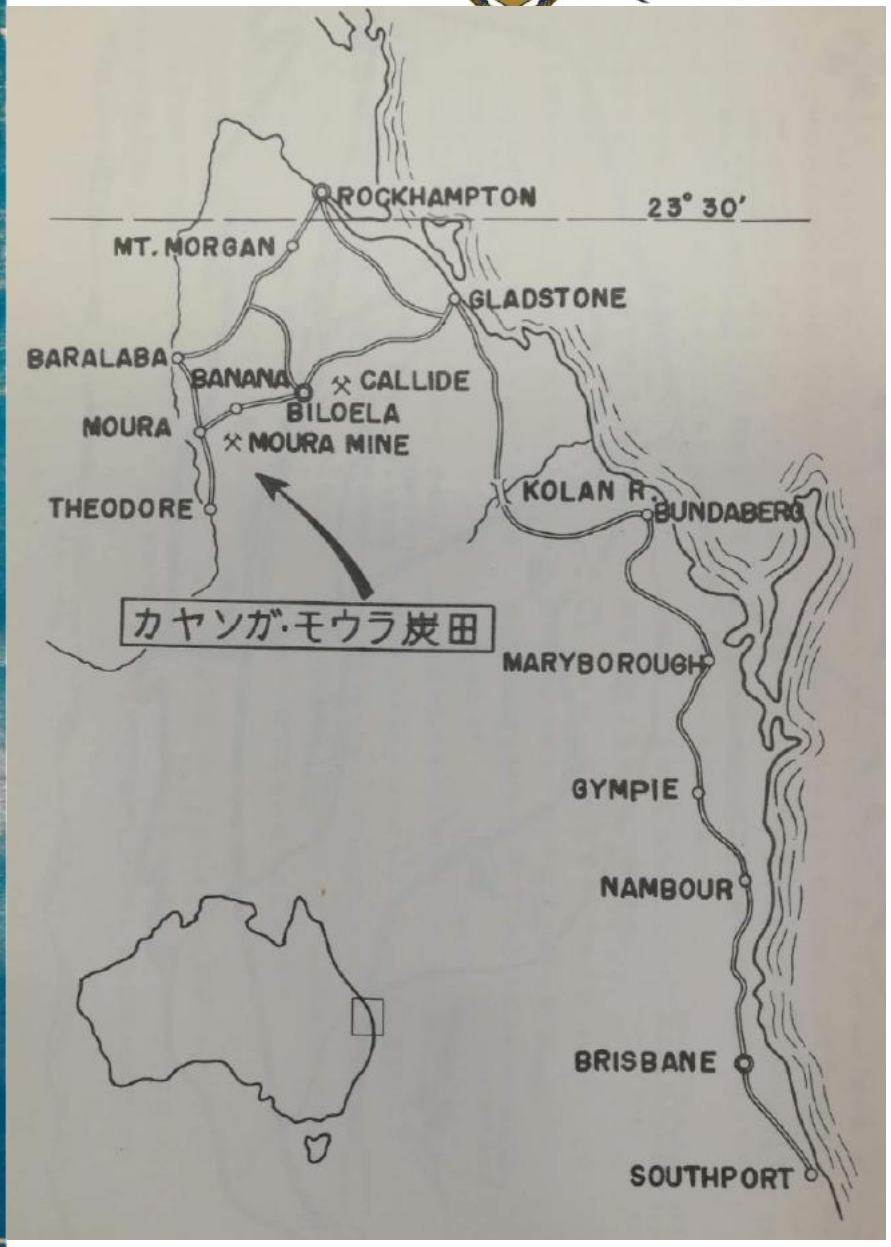
■Number of employees
(as of March 2016)
Yawata Works ..... 4,200 people

■Size of Yawata Works
Equivalent to 237 times the Tokyo Dome
Equivalent to 158 times the Fukuoka Yafuoku! Dome

■Water usage quantity (as of 2015)
Daily basis ..... 3.06 million tons
*Return water recovery rate 90%


BUSH LIFE
by
HIROSHI OKANO
THE STORY OF THE DISCOVERY OF THE
HARD COKING COAL AT MOURA. CENTRL QUEENSLAND
AUSTRALIA.





Frederick William Whitehouse

F.W. Whitehouse, Morotai, 1945

Born	December 20, 1900 Ipswich, Queensland, Australia
Died	March 22, 1973 (aged 72)
Nationality	Australian
Alma mater	Ipswich Grammar School, University of Queensland, St John's College, University of Cambridge
Awards	Walter Burfitt prize and medal
	Scientific career
Fields	Geologist, Naturalist

Frederick Whitehouse attended Ipswich Grammar School, and went on to study at the University of Queensland. He graduated with a B.Sc., with first-class Honours in geology and mineralogy from the University of Queensland in 1922, and a government gold medal for outstanding merit. He and fellow student **Dorothy Hill**, had collected many fossils during their studies at UQ, which had advanced their individual and shared research in the field.

Whitehouse was Associate Professor of Geology, University of Queensland (1949-1955). **Whitehouse** resigned from the University in 1955. He continued to work as a geological consultant for many oil companies from 1955, and was president of the Anthropological Society of Queensland from 1972 to 1973.

Whitehouse was a close friend of **Dr James O'Neil Mayne** (1861-1939), who with his sister **Mary Emelia Mayne** purchased land in St Lucia in 1926, which was to become the new site of the University of Queensland.

モウラ炭鉱開坑時（１９６１年４月）

(DW)－(DW) ドウソン・ハイウエイ　　(W) ワードルの家

(WA) 現在ここに選炭工場あり　　(MT. W) ワイズマン山

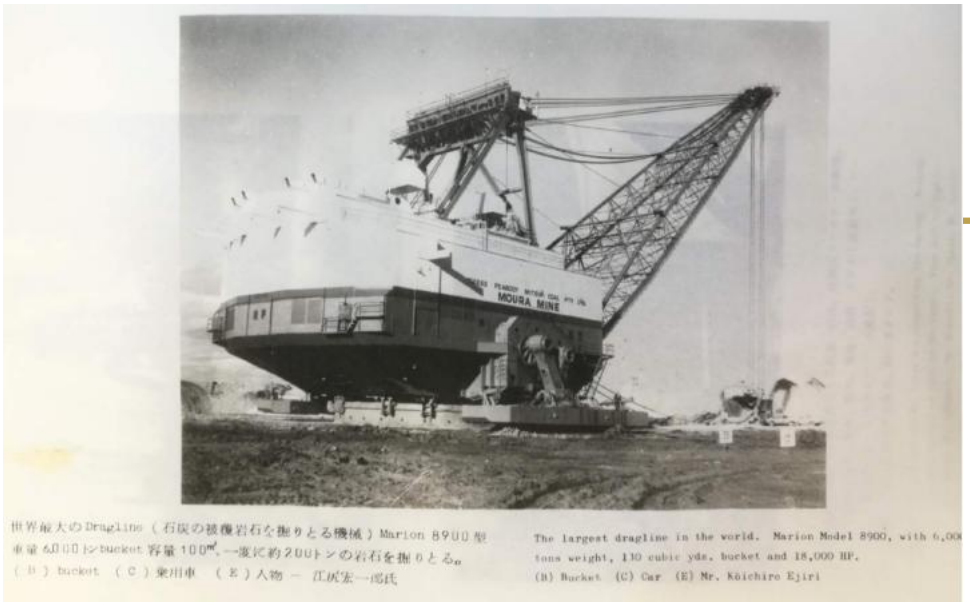
(B) この辺一帯はビショップの所有の牧場で羊が群れていた。

Moura Mine at the begining (Apr., 1961)

(DW) - (DW) Dawson Highway　(W) Mr. Wardle's house

(WA) Washery at present　(MT. W) Mt. Wiseman

(B) Around here was the meadow of Mr. Bishop's property and sheep were grazing here once.



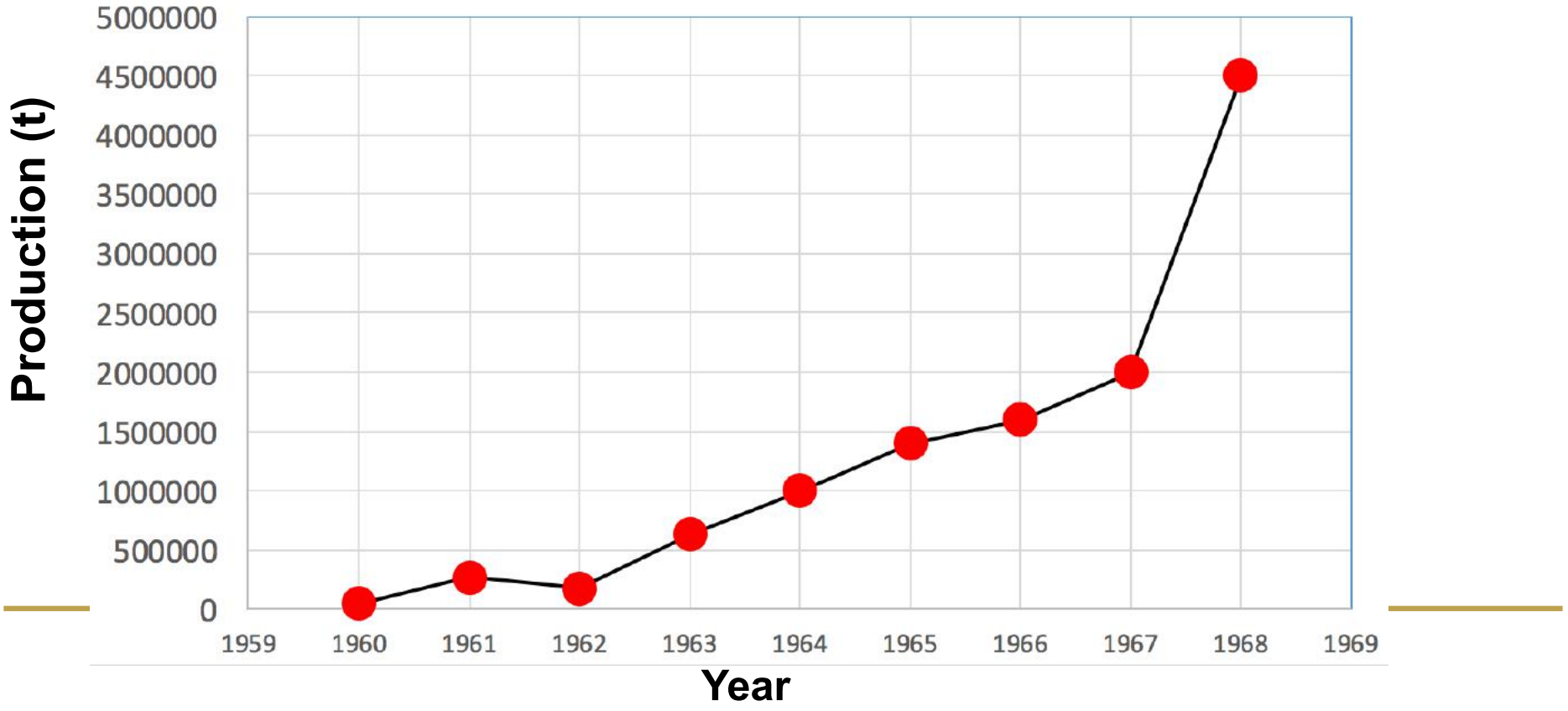
世界最大のDragline（石炭の被覆岩石を掘りとる機械）Marion 8900型
重量6,000トン bucket容量100㎥ 一度に約200トンの岩石を掘りとる。
（B）bucket （C）乗用車 （E）人物 — 江尻宏一郎氏

The largest dragline in the world. Marion Model 8900, with 6,000 tons weight, 130 cubic yds. bucket and 18,000 HP.
(B) Bucket (C) Car (E) Mr. Koichiro Ejiri

モウラ炭鉱全景
（1）選炭工場 （2）ドラグライン （3）発破のための穿孔機
（N）—（D）Dawson Highway

A bird's eye view of Moura Mine.
(1) Washery (2) Dragline (3) Drilling machine for the blast holes (N) - (D) Dawson Highway (N) - (S) Meridional line

Coal production from Moura mine



Exploration and Exploitation of Hard Coking Coal in Kianga-Moura Field, Central Queensland, Australia.

by

Hideo KIKUCHI, Masatoshi TSUTSUMI, Hiroshi OKANO, Tadashi SAKAMOTO and Atsuo AIHARA

Kouzan Chishitsu, 15 (1965) 234-244.

(Abstract)

Owing to a very limited amount of hard coking coal production in Japan, Japane been constantly seeking nearer and adequate supply source for that kind of coals They have been producing hard cokes by blending domestic soft coking coals with which American coals were dominant until 1955 or so.

In order to fulfill these demands and upon request of the Mitsui & Co., Ltd., attention and made studies of the Kianga-Moura Field in Central Queensland, Austr first field survey from January to April, 1959, we gained the followinge knowledge conclusion as mentioned below.

(1) In Baralaba, the northern extremity of this field, occurence of anthracite ha 1889 and since then the mines were opened. Many prospecting works were carried geological features of coal seams in and around the area. The results revealed tha anthracite or anthracite containing 10% or less volatile matter, and that the stru contorted with NW-SE faults and folds.

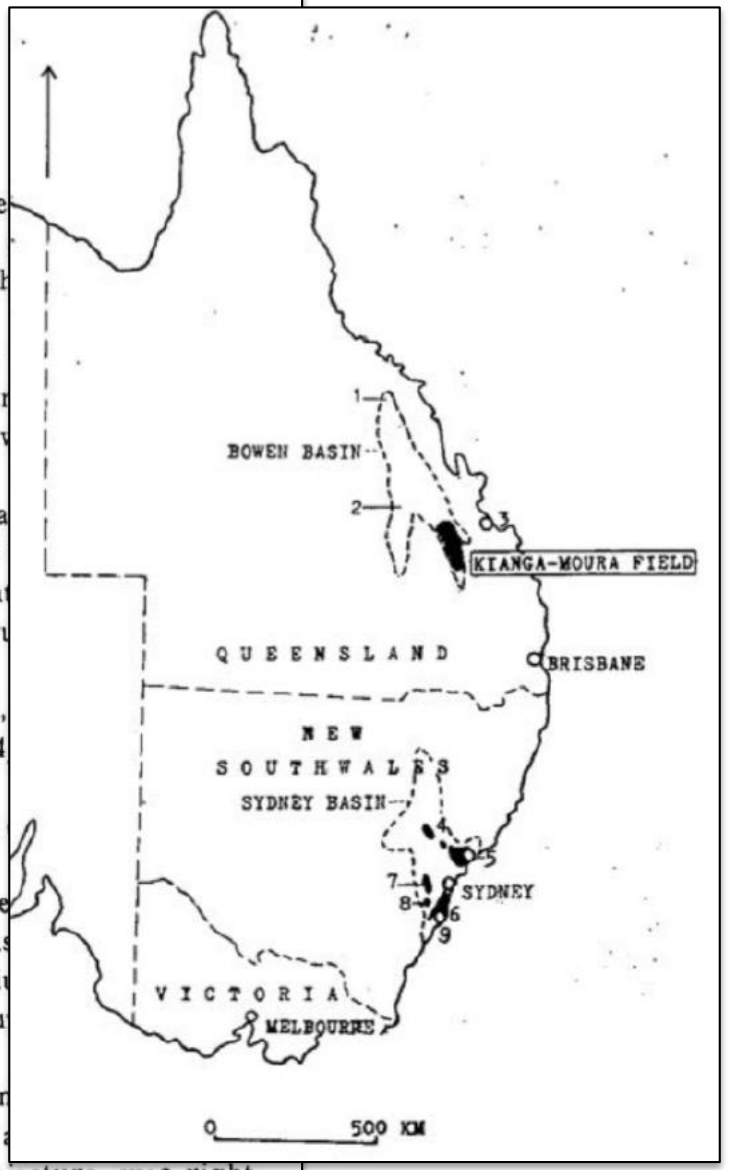
(2) In Kianga, southern sector of the field, the Thiess Bros. (Qld.) Pty., Ltd., seam in box-cut after prospecting by drillings. Coal is soft coking coal with 34 matter. The coal seam has a gentle westward dip of 6—8 degrees.

(3) Judging from the geological features of the above two areas, the coal seams to occur in the same horizon or nearly in the same horizon.

(4) The difference in coal quality between Baralaba and Kianga is thought to be the tectonic movement by which the complicated structure of the Baralaba area was

(5) The above-mentioned geological assumption leads to a conclusion that medi coal with a possibility of hard coking coal, may be concealed underneath the vast u between Baralaba and Kianga, covering a distance of 60 km.

From the said point of view, the second prospecting work was commenced in Jun for hard coking coal required by the Japanese Steel Mills, with the cooperation revealed that our geological conjecture was right,



鉱 山 地 質,15(73),234~244,1965

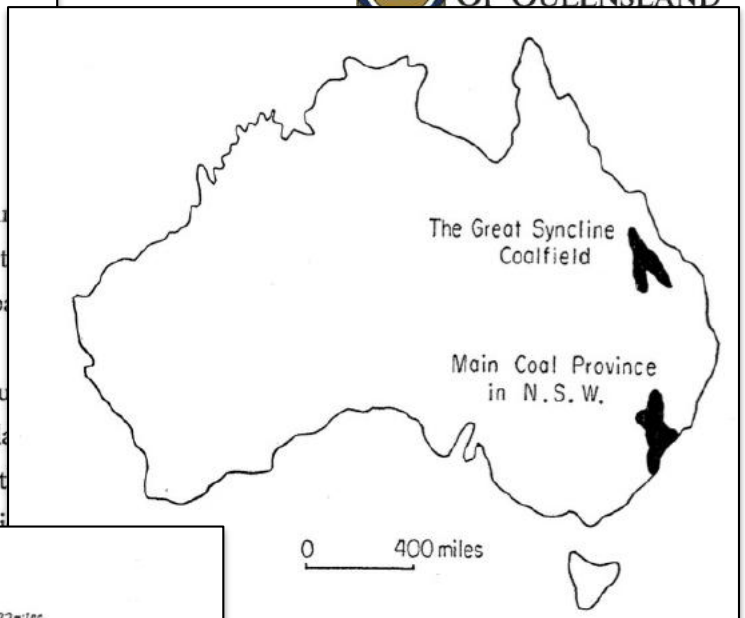
Regional Variation in Rank of Coal in the Great Syncline Coalfield, Queensland, Australia

by Hiroshi Okano and Atsuo Aihara
(Mitsui Mining Company)

SYNOPSIS :—A regional variation of coal quality was recognized within the cou
of writers' 1959~1960 prospecting work for hard coking Coal at Kianga-Moura area in t
Great Syncline Coalfield (Bowen Basin), and some upper Bowen coals in the central pa
of the basin are delt with.

The higher rank (higher C content) coals are protted on the part of lower valu
in a coal band of the H/C versus O/Cdiagram (Fig. 4) reproduced from analitical da
of localities (tab. 1). Distances between coal localities and western limit line of t
"Dawson Tectonic Zone," a striking folding and faulting zone in the south eastern porti
of the basin, connecting Banana and Bluff via Barala
the tectonic zone and regional rank variation is recog
higher the rank. From a geological view point of mi
the central part of the basin with local exception in
effect to the rank variation is negligible in general.
of burial) that has important concern to the rank var
limited at the base of Clematis Sandstone according
Taurus, Baralaba and Moura do not correspond with t
depositional facies of coal seams and thickness and na
that the coals near or in the zone were buried in deep
anomalous case, and the thickness of burial might ha
the regional variation of rank.

As a conclusion, most important role had been
of the basin from the begining and migration of centre o
of the Dawson tectonic movement; the increase of
deeper burial of coal seams and added heat and stres
pressure that occoured during the formation of the m
would be effective functions in the course of coalificat



Localty map of the Great Syncline Coalfield

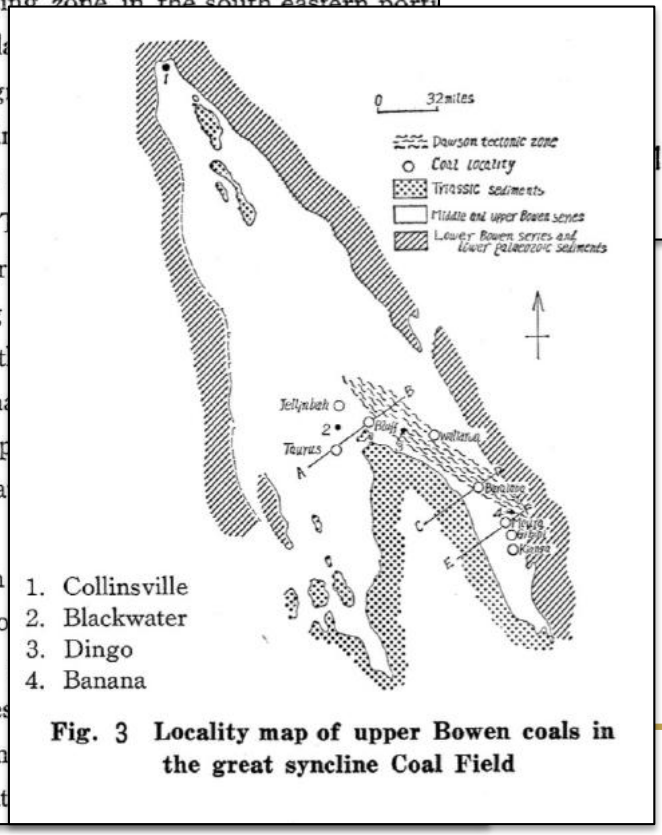
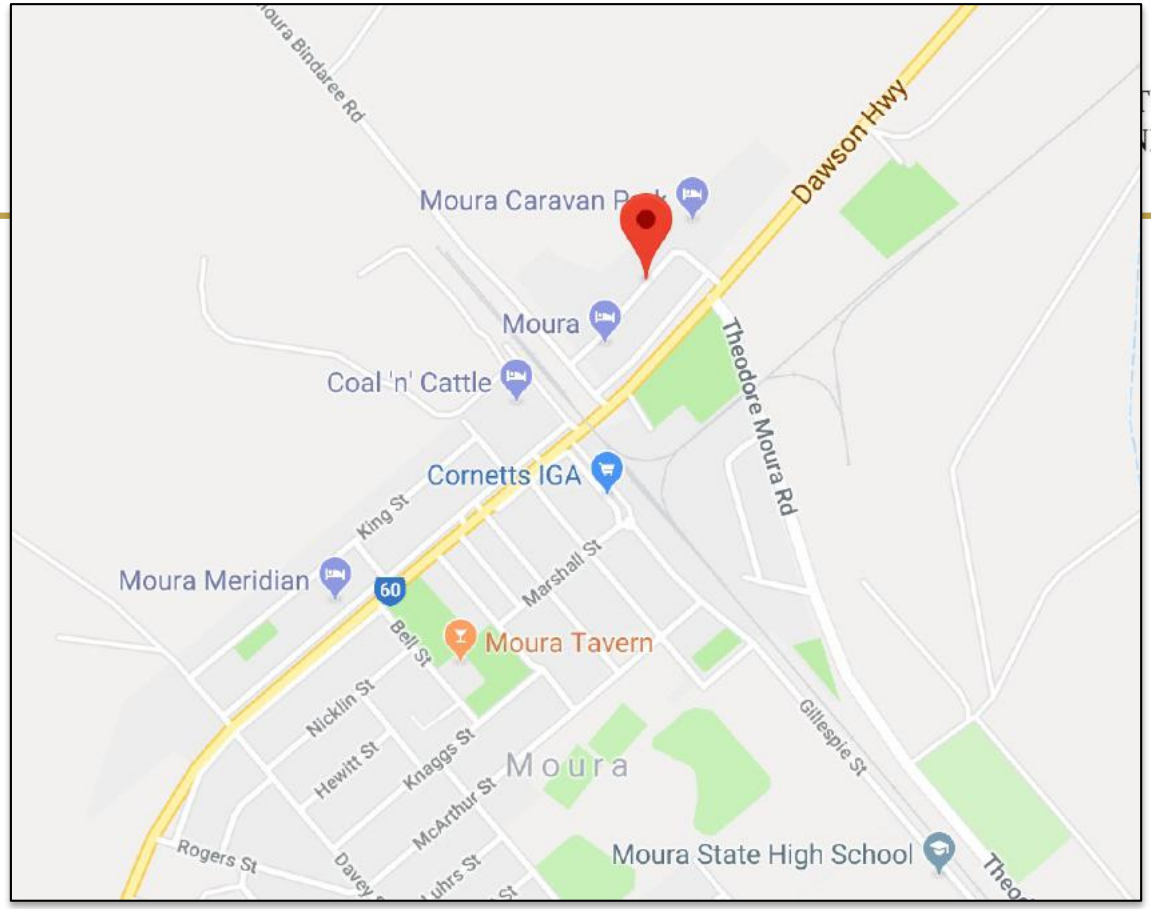


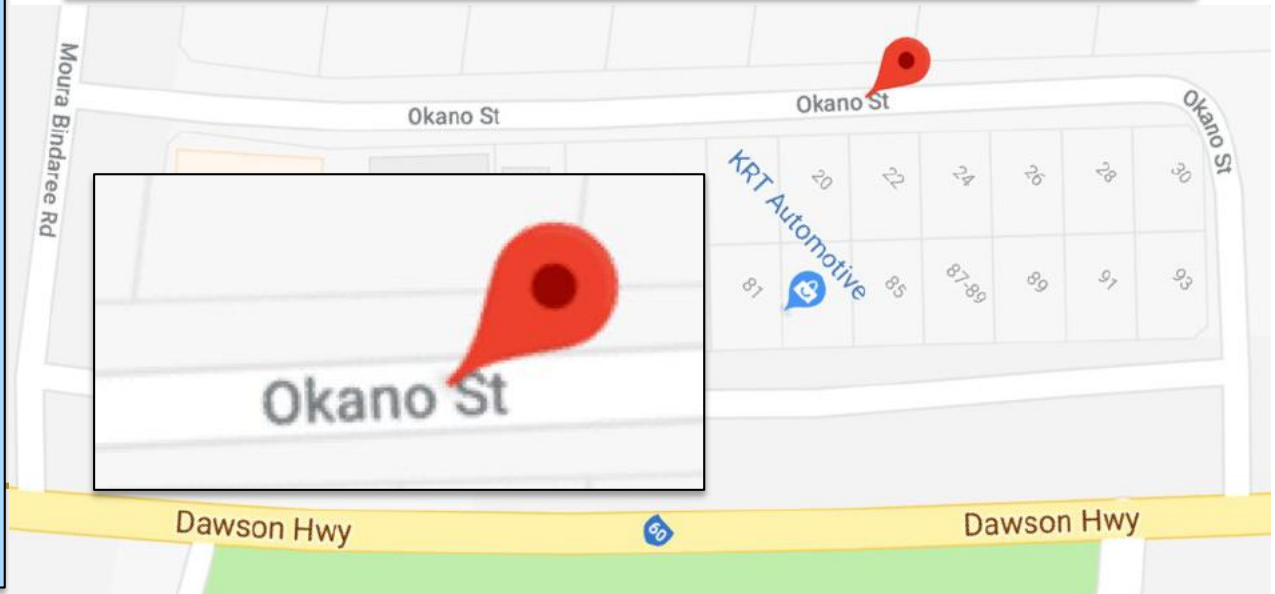
Fig. 3 Locality map of upper Bowen coals in the great syncline Coal Field

「燃 料 協 会 誌 」
第44巻 第464号(1965)

U.D.C.
551. 3: 552. 574 (420)


Airlie Beach
Mackay
Rockhampton
Gladstone
Moura
Bundaberg
Hervey Bay
Sunshine Coast
Brisbane
Toowoomba
Gold Coast
Coffs Harbour
Google


Moura Caravan Park
Dawson Hwy
Moura
Coal 'n' Cattle
Cornetts IGA
Theodore Moura Rd
King St
Moura Meridian
60
Marshall St
Bell St
Moura Tavern
Nicklin St
Hewitt St
Knaggs St
Moura
McArthur St
Gillespie St
Rogers St
Moura State High School


Moura Bindaree Rd
Okano St
Okano St
Okano St
KRT Automotive
20
22
24
26
28
30
81
85
87-89
89
91
93
Okano St
Dawson Hwy
60
Dawson Hwy