CURRICULUM VITAE

NAME : Ferdinando Moretti

DATE OF BIRTH : November 28th, 1965

NATIONALITY : Italian

ADDITIONAL LANGUAGES : English (both spoken and written

professional knowledge -

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EDUCATION:

- I. Electronic Engineering College (Industrial Technical Institute "A. Malignani" Udine) 1985-1990
- II. Faculty of Philosophical Studies (University of Trieste), 3-year attendance 1990-1993

TRAINING COURSES:

Every year I attend professional refresher courses on topics related to metallurgy and welding. Recently I attended the following courses at the AIM (Italian Metallurgic Institute):

- 1. Heat Treatment on steel works, forging, and no ferrous materials;
- 2. Metallurgy of Forgings;
- 3. Alloy steel for high-temperature Cr, Mo (Creep);
- 4. Metallurgy and Corrosion on Stainless Steel materials;
- 5. Artistic cast iron, recovery, and repair procedure
- 6. Duplex/Super Duplex plate, forging and welding.

Planned for the current year a training course on Metallurgy/weldability of Ni Alloy.

PROFESSIONAL QUALIFICATIONS:

- I. International Welding Technologist -IWT N°080048A- (at the Italian Institute of Welding, Genoa 2008).
- II. International Welding Specialist (at the Italian Institute of Welding, Genoa 2000).
- III. NDT Level II qualification in MT, PT, RT, VT, UT as per UNI EN ISO 9712-2012; PED 97-23-CE
- IV. NDT Level II qualification in UT-TOFD as per UNI EN ISO 9712.2008.
- V. NDT Level II qualification in UT-PA (Phased Array) as per UNI EN ISO 9712.2008.
- VI. Coating Inspector Level A -INAC No. 239-(at the Italian Institute of Anticorrosion, Milan 2010)
- VII. <u>Saudi Aramco Inspector</u> for: Pressure Vessels and Heat Exchangers (QM:03/04/12/13/14/15/30/31/34).
- VIII. <u>FLUOR approved for inspection on:</u> Pressure Vessels, Heat Exchangers and Valves

(For details see "Certification Section" on my website www.ferdinandomoretti.com).

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COLLABORATIONS:

- I. Starting from 2008 I'm **working as a teacher** in secondary schools (ITS Malignani) and in technical training courses as a welding/metallurgic specialist.
- II. IIS Istituto Italiano Saldatura (Italian Istitute of Welding) as Welding Inspector
- III. Udine Courthouse as Welding Technical Consultant (since 2006)

PROFESSIONAL EXPERIENCE:

Fabrication Quality Control Management on the following items:

- I. Pressure Vessels, Columns,
- II. Reactors, Separators and Heat Exchangers (Heavy wall THK material CrMo, CrMoV)
- III. Heat Exchangers -several typologies and materials CS, SS, Ni alloy, Ti-
- IV. Urea Reactors/Ammonia Converters/Stripper equipment
- V. Methanol Reactor, Waste Heat Boiler, Steam Superheater

(For detail see annex "Project Reference List)

- VI. Non-Destructive Examinations on several steel materials
- VII. Destructive Examination Tests on several steel materials
- VIII. NDT and DET on coating/painting

The latest Project was completed on 2023/24

YARA Engineering: I was involved in several projects for the fabrication of **Heat Exchangers** of several dimensions and materials CS, SS, Ti and **NH3 Burners**. The inspections were carried out in several facilities in **Italy and Spain.**

Haldor Topsoe: Project Nakhodka Plant for construction of No.3 Methanol Reactors; Steam Superheater and Waste Heat Boiler. The inspections were carried out in several facilities in **Italy and Romania**.

SAIPEM: Thai Oil Clean Fuel Project for construction of No. 7 Separators, heavy wall THK (180-230mm) material Cr, Mo, V. The inspections were carried out in **Italy**.

Working history:

My name is **Ferdinando Moretti**. I was born in 1965, I'm married, I have two daughters and I live in Udine, a small town in a region called "Friuli-Venezia Giulia" in the North East of Italy.

I **started working in 1982** in the electrical engineering sector until 1995. Later I worked for 10 years as NDT and welding manager at MANGIAROTTI S.p.A., one of the most important companies in Italy for the manufacturing of pressure vessels. (In 2021 Mangiarotti S.p.A. was bought by Westinghouse).

Lastly **since 2006** I have been working as a freelance **Welding Inspector** in the Oil & Gas in Italy and abroad. I am specialized in the following items: **Pressure Vessels** -several sizes and materials SS, CS, Ti, Steel low temperature (Ni alloy), Steel high temperature (Cr, Mo, V alloy) and cladding; **Reactors/Separators** -heavy wall thk in Cr, Mo, V (Code ASME + API 934-A); **Urea Reactors, Ammonia converter, Stripper** -several sizes-; **Heat Exchangers** - different typologies as per code TEMA-R- and Materials CS, SS, Ti, Ni alloy; **USC boilers. Methanol reactor, Waste Heat Boiler, Steam Superheater**. I periodically performed checks on **valves** -several sizes and types- (API Standard), **forged and cast products,** and in some occasions, I monitored the painting activities as a coating inspector. *The list of all projects I worked on, can be seen on annex "Project Reference List.*

My professional experience in the pressure vessel construction and inspections started in a world-leading company -Mangiarotti Spa- where I worked as a contract execution manager for inspection and testing. I covered

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the same role as a consultant, enriching my experience in the workshop, including a specific development in **metallurgy of welding and inspection.** Moreover, I'm **working as a teacher** in secondary schools (ITS Malignani) and in technical training courses as a welding/metallurgic specialist.

In the last years I focused my working experience as a lead welding inspector on several projects regarding heavy wall Thk in Cr, Mo, V material Reactors and Separators on behalf of FLUOR; KBR; JGC; Conoco-Phillips; FW-CHS; Hargrove-Chevron. On behalf of CF Industries (US) I worked on several Items like Urea Reactors, Ammonia Reactors, BFW Preheater (Exchanger). On behalf of YARA for the construction of the several Heat Exchangers in CS, SS, Ti materials and NH3 Burners.

In addition, I have been involved on behalf of Fluor in PJV Project for the construction of No. 25 Pressure Vessels several materials/dimensions. On behalf of PETROFAC in TurkStreem Project for the construction of No. 6 Gas Separation, on behalf of DuPont (US) for the construction of the Finisher Agitator Cage.

The latest years were very important for my activity and my professional knowledge, with several projects successfully completed. Here below some recent comments on my performance received from clients. (For detail see annex "Client references")

Hi Grazio.

For the rest this is an excellent inspection report. **Ferdinando** is clear is his writing and put is the right supporting photos. I wished that all inspector write such reports.

Martijn Hendrickx | FLUOR Consultants B.V./YARA

Dear Ferdinando,

I completely understand the need to keep your word with your client. It was a great relief to know that our interests were being looked after by someone of your expertise. I look forward to the next project we have where we can utilize your talents.

Kindest Regards,

Jeff Birdzell I CF Industries Senior Process/Project Engineer Woodward Nitrogen Complex

Hi Ferdi.

I would like to take this opportunity to thank you for all your hard work during the manufacture and inspection of the FB-4-0218 Mangiarotti Heavy Wall Pressure Vessel scope.

I wish you best of luck for the future and would have no hesitation in recommending you for any future inspection assignments.

Steve Judeni KAZAKH PROJECTS JOINT VENTURE LIMITED (PJV) SQS Coordinator (FLUOR)

Dear Ferdi,

It was indeed a great pleasure to have an inspector like you for our job even though it was not a complex one in terms of material, design but to keep in mind of the heavy thickness involved (212mm) during fabrication. This is where your expertise and experience had helped us along with your knowledge in PAUT & TOFD to sail through without any hiccups.

Really we commend you for the excellent performance and timely approach shown throughout the job. With Regards, Kundannuru Subhash -PATROFAC-

Thanks, Ferdi.

You are on the top of my list to call if I need help.

It has been a rare pleasure and an honor to get to know you. ... I know we will work together in the future...

If work prospects get bad and you need some help let me know.

A lot of work has slowed down due to crude prices but it will rebound.

Kevin Gaskin Quality ManagerCHS Inc. (Cenex Refinery)

Ferdinando,

I'm joining my congratulations to successful job completion in addition to George statement below,

Thank you again for all your help,

And hope we could work in future again!

Regards Alon Raichman TAIF-NK Project Coordinator alon.raichman@kbr.com

I have the Welding Specialist and International Welding Technologist qualifications, obtained from the Istituto Italiano della Saldatura (Italian Welding Institute). I also obtained Level II for NDT checks (VT, MT, PT, UT, RT), Level II for UT-TOFD and Level II for Phased Array (PA). I obtained the qualification of Coating Inspector Level A from the Italian Anti-Corrosion Institute and ARAMCO qualify for Pressure Vessels and Exchangers. FLUOR approved for inspection on: Pressure Vessels, Heat Exchangers and Valves.

The experience gained during both the KBR project (2013/2014) and the JGC (2010) project with new generation Reactors/Separators enabled me to build a significant knowledge of refractory lining, internal shroud and internal appurtenance in SS materials fabrication.

Between 2011-2012, I had a special training that lasted about 6 months, with **Mr. Yoshimizu Y. (Refractory Specialist -API 936- JGC Japan)** regarding refractory application. This training was carried out on a building yard during the fabrication of 4 Reactors and 2 Separators (Project: Puerto La Cruz -PDVSA-Venezuela). The **training included**: qualification of process, material and personnel, monitoring of the application of refractory lining, checking of the refractory after curing and dry-out and witnessing at test on refractory samples at Thermal Ceramics Laboratory.

Regarding the KBR project (2014) I worked together with **Mr. David Smith** Refractory Specialist of Quartis Limited. My activity involved the surveillance of refractory application by casting and NDE checks.

In my **free time** I work in the **artistic workshop** of my wife, where she creates objects in ceramic and I make small objects in steel. Finally, I **like running in the mountains** (with my beautiful dog Axel) and participating in several competitions of Sky-race in Italy and abroad.

More details on Projects and several pictures are available on my website www.ferdinandomoretti.com

Some of the main projects I followed as Welding Inspector in recent years were:

- 1. YARA: I was involved in several projects for the fabrication of Heat Exchangers of several dimensions and materials CS, SS, Ti and NH3 Boilers.
- **2. Haldor Topsoe:** Project Nakhodka Plant for construction of No.3 Methanol Reactors; Steam Superheater and Waste Heat Boiler. The inspections were carried out in several facilities in Italy and Romania.

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- **3. SAIPEM:** Thai Oil Clean Fuel Project for construction of No. 7 Separators, heavy wall THK (180-230mm) material Cr, Mo, V. The inspections were carried out in Italy.
- **4. Project:** PJV Project, construction Qty. No. 25 Pressure Vessels several materials/dimensions. I worked on behalf of **Fluor (UK)**
- 5. Project: TurkStreem Project, construction of No. 6 Gas Separation. I worked on behalf of PETROFAC.
- Project: Ammonia Converters Qty, No.4 (SA 336 F11 Cl3; 154mm Thk). I worked on behalf of CF Industries -US-
- 7. Project: Urea Reactors Qty, No.3 (SA 765 IV + SA240 310 MoLN 118mm Thk). I worked on behalf of CF Industries -US-
- 8. **Project:** Jazan -Saudi Arabian- Qty No.10 Gasification Reactor (SA387 Gr.22 C.2; 95mm Thk).
- 9. I worked on behalf of Saipem.
- 10. Project: Pascagoula Chevron Refinery -US- No.1 Reactor (SA 336 F22 V + wo tp 347; (176mm Thk).
- 11. I worked on behalf of Hargrove Engineers/Chevron.
- **12. Project:** CHS Laurel Montana -US- No.4 Reactors-Hydrotreaters. (SA 336 F22 V + wo tp 347; (121mm Thk). I worked on behalf of **CHS -U.S.-**
- **13. Project:** TAIF HRCC-VCC Republic of Tatarstan No. 2 PPH Hot High Pressure Separator. (SA 336 F22 V + wo tp 347; (263mm Thk) + 100mm Refractory + Shroud SS. I worked on behalf of **KBR -U.S.-**
- **14. Project:** <u>RPLC DEEP CONVERSION PJ PHASE Puerto La Cruz</u> (PDVSA-Venezuela)- No. 4 Hydroconversion Reactors and No. 2 HPHT Separator. <u>I</u> worked on behalf of **JGC -Japan-.**
- **15. Project:** <u>Kuwait New Refinery</u>; No. 4 Reactors and 6 Separators (SA 336 F22 V + wo tp 347; (290mm Thk). I worked on behalf of **Fluor U.S.**
- **16. Project:** Conoco/Phillips, Rodeo California; No. 3 Hydrocracker Reactors (Material: SA 542M Tp D Cl 4a + wo tp 347; (210mm Thk). I worked on behalf of **Fluor U.S.**
- 17. **Project:** TOTAL, Port Arthur Refinery, Texas; No. 1 HDS Reactor (Material: SA 542M Tp D Cl 4a + wo tp 347; (145mm Thk). I worked on behalf of **Fluor U.S.**

Ferdinando Moretti

"autorizzo il trattamento dei dati personali contenuti nel mio C.V. ai sensi dell'art. 13 del D.Lgs. 196/2003 e del GDPR 679/16"

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