

## Curriculum Vitae: Dipl. Ing. Uwe Bruder

1. **Proposed Position:** Consulting Engineer Mineral Processing

2. **Name of Firm:** Bruder Consult

3. **Name of Staff Uwe Bruder**

4. **Date of Birth:** June 24. 1958

**Nationality:** German

5. **Education:**

Name of institution	Degree(s) or Diploma(s) obtained:	Date of obtainment
Berufsschule Schlema	Skilled worker for industrial process and system control	1975-1978
Technical University Bergakademie Freiberg, Germany	Dipl. Ing. Mineral Processing	1978-1983

6. **Membership in Professional Associations:**

Membership of the Society GDMB (Society for Metallurgy and Mining)

7. **Other Training:**

Institution [ Date from - Date to ]	Degree(s) or Diploma(s) obtained:
Language school Weiden	English
Participation in many mining and chemical engineering events and conferences, presentation of professional papers, e.g AT (Aufbereitungstechnik, Steinbruch & Sandgrube, Gesteinsperspektiven,	

8. **Other Skills:**

Excellent skills in MS Office

9. **Present position:**

Consultant mineral processing

10. **Years within the Firm:**

3 years as a free mineral processing consultant

## **11. Key Qualifications:**

More than 30 years of theoretical and practical work experience in over 35 countries on almost every continent enable me to provide you with profound specialist knowledge of mineral processing including project management, flow sheet and plant layout development, test work (laboratory and on site), machinery and plant delivery and customer consulting.

As a qualified partner in preparation of ores and minerals, I can therefore offer you the following range of services:

- development of flow sheets (plant parts or complete plant)
- control and evaluation of new and existing flow sheets
- plant audits
- creation of testing plans
- controlling and optimization of existing testing plans
- running of test work on site and in the laboratory
- support of test work at machinery and plant suppliers
- selection of suitable machinery and equipment
- check of suppliers' offers
- supervision of commissioning

## **12. Countries of Work Experience:**

(List countries where staff has worked in the last fifteen years)

### **EUROPE**

Austria  
Belarus  
Bulgaria  
Czech Republic  
France  
Germany  
Italy  
Netherlands  
Poland  
Russia  
Spain  
Switzerland  
Turkey  
U.K.  
Ukraine

### **AFRICA**

Egypt  
Ghana  
Congo  
Rwanda  
Morocco  
Mauritania  
Mozambique  
Namibia  
South Africa  
Uganda  
Liberia

**ASIA**

Iran  
Jordan  
Kazakhstan  
Singapore / Malaysia  
Uzbekistan  
Vietnam

**AMERICA**

Cuba  
USA

**SOUTH AMERICA**

Peru

**13. Languages:**

(For each language indicate proficiency: good, fair, or poor in speaking, reading, and writing)

Language	Speaking	Reading	Writing
German	Mother tongue	Mother tongue	Mother tongue
English	good	good	good
Russian	poor	poor	poor

#### 14. Record:

Date: from - to	Since 2012
Employer	Free lancer
Position held	Free lancer Exclusive representative for Derrick Corporation in Germany, Austria and Switzerland
Description	Consulting engineer

Date: from - to	2006 - 2012
Employer	Derrick Corporation (Fine screen supplier based in Buffalo NY, USA)
Position held	Sales Manager Europe and North Africa,
Description	Coordination of European and north African Project's and representatives in each country

Date: from - to	1990 - 2006
Employer	AKW Apparate und Verfahren GmbH
Position held	Project Engineer
Description	Sales of Plants and Equipment for mineral processing, Engineering, Flow sheet development, Plant lay out development, After Sales Service

Date: from - to	1983 - 1990
Employer	Research Centre SDAG Wismut, Germany
Position held	Research Engineer (team leader) for mineral processing and uranium leaching,
Description	Development of mineral processing methods, mainly leaching and hydrometallurgy

## References

(until End of 2016)

The following references give a brief overview of my work experience, classified by continents and in alphabetical order by country. All references include direct work with customers or engineering companies and company visits.

### EUROPE

15. Detailed Tasks Assigned	16. Work Undertaken that Best Illustrates Capacity to Handle the Tasks Assigned
Derrick screens in sand industry	<p>Name of assignment or project: <b>sand classification</b>            Location: Austria            Position held: Sales Manager            Client: <u>Quarzwerke Austria</u>            Main project features: fine sand wet classification</p> <p style="text-align: center;">Derrick screens in wolfram industry</p>
Replacement of hydro cyclones in milling circuit	<p>Name of assignment or project: <b>closed milling screen classification</b>            Location Austria            Client: <u>Wolfram Bergbau und Huetten AG, Mittersill</u></p> <p>Positions held: Project and Sales Manager</p>
Consulting, test work, deliver of thickener, commissioning Project Management	<p>Name of assignment or project: <b>10 m thickener for salt</b>            Location: Belarus            Client: <u>Belaruskali</u>            Positions held: Project and Sales Manager</p>
Project planning, screen for glas sand, mica, feldspar and barite fine screening	<p>Name of assignment or project: <b>fine screening</b>            Location: Bulgaria            Position held: Project and Sales Manager            Client: <u>Kaolin Senovo</u> (long term relations)</p> <p>Over 15 years consulting, machinery delivery, test work, commissioning;            12 Derrick screens in operation</p>

<p>Installation of Derrick screens in milling circuit, consulting, engineering, test work on side</p>	<p>Name of assignment or project: <b>fine screening in milling circuits</b>  Location: Bulgaria  Position held: Project Manager  Client: Assarel Copper Plant</p> <p>Replacement of hydro cyclones in milling circuit</p>										
<p>audit waste water plant, test work, flow sheet</p>	<p>Name of assignment or project: <b>wash water purification</b>  Year: 2014 -ongoing  Location: Czech Republic  Position held: Consultant</p> <p>Client: <u>Sugar plant České Mezifiči 2013</u></p>										
<p>Audit of beneficiation plant Automating concept</p>	<p>Name of assignment or project: <b>kaolin plant modernisation</b>  Year: 2014 - ongoing  Location: Czech Republic  Position held: consultant  Client: <u>Kaolin plant Sedlecky Kaolin</u></p>										
<p>Fine sand projects in several locations</p>	<p>Name of assignment or project: <b>dry fine screening of sand</b>  Location: France  Client: <u>Fulchiron, Sibelco</u>  Positions held: Project and Sales Manager,</p> <p>More than 10 Derrick screens in sand industry in France,</p>										
<p>Projects in Germany   Mineral processing  Flow sheet development  Test work  Plant erection  Project management  Machinery delivery  Commissioning</p>	<p>Name of assignment or project: <b>projects in Germany</b>  Year: 1990 - ongoing  Location: Germany  Clients: more than 100  Positions held: Project Manager, Sales Manager, Consultant  More than 30 years' experience in mineral processing, consulting, flow sheet development, test work, plant erection, project management, machinery delivery, commissioning</p> <p>Areas:</p> <table border="0"> <tr> <td>- Barite / Fluorite</td> <td>- Kaolin</td> </tr> <tr> <td>- Bentonite</td> <td>- Potash</td> </tr> <tr> <td>- Calcium carbonate</td> <td>- Pumice</td> </tr> <tr> <td>- Gold</td> <td>- Recycling</td> </tr> <tr> <td>- Iron ore</td> <td>- Sand and Gravel</td> </tr> </table> <p>Installation of more than 50 Derrick screens in Germany</p> <p>Germany (extract from last 3 years)</p> <p><u>Witterschlick, sand and gravel plant 2014</u> audit, flow sheet development, test work</p> <p><u>Holemans, sand and gravel plant 2013</u> audit, flow sheet development, test work</p> <p><u>Heim Industrial Minerals 2014 till today</u> special sand recovery, test work, flow sheet</p>	- Barite / Fluorite	- Kaolin	- Bentonite	- Potash	- Calcium carbonate	- Pumice	- Gold	- Recycling	- Iron ore	- Sand and Gravel
- Barite / Fluorite	- Kaolin										
- Bentonite	- Potash										
- Calcium carbonate	- Pumice										
- Gold	- Recycling										
- Iron ore	- Sand and Gravel										

	<p><u>Mineral Projekt 2013 till today</u> Several projects in recycling of slags, electronic scrap and domestic waste</p> <p><u>Eirisch Maschinenfabrik 2014</u> REM milling project, flow sheet development</p> <p><u>PAB, diatomite preparation 2012</u> flow sheet development, test work</p> <p><u>Kaolin und Tonwerk Seilitz 2013</u> audit, filterpress project</p> <p><u>UVR-FIA, 2014</u> Cyclone plant project, flow sheet development CAPEX-OPEX calculation</p>
Fine sand screening	<p>Name of assignment or project: <b>fine sand screening</b> Location: Italy Positions held: Project and Sales Manager Installation of more than 10 Derrick screens in sand and gravel industry</p>
Fine organic recovery from waste water in sugar industry	<p>Name of assignment or project: <b>waste water purification</b> Location: Netherlands Client: <u>Sugar Notre Dame</u> . Positions held: Project and Sales Manager</p> <p>Derrick Screens in sugar industry</p> <p><u>B&amp;D</u></p>
Fine coal screening (wet)	<p>Name of assignment or project: <b>fine coal recovery</b> Location: Netherlands Client: <u>B&amp;D Engineering</u></p> <p>Positions held: Project and Sales Manager Derrick Screens in coal industry</p>
Consulting, flow sheet development, Erection supervising Commissioning	<p>Name of assignment or project: <b>sand and coal project for fine screening</b> Location: Poland Client: Sand and coal plants Positions held: Project and Sales Manager Permanent work on Polish marked for more than 20 years.</p> <p><u>3 Coal mines Jaworzno, Jamnia, Jan Kanty</u> Fine coal recovery (similar for each plant), flow sheets development, plant delivery, test work, commissioning, project management, after sales service</p> <p><u>PCC-Rail fine sand plant</u> Flow sheet development, plant delivery, test work, commissioning project management, after sales service</p>

	<p><u>Rybaki fine sand plant</u> Flow sheet development, plant delivery, test work, commissioning project management, after sales service <u>KGHM Copper plant</u></p> <p>Test work in copper milling (KGHM) circuit with Derrick screens, consulting</p> <p><u>Additional:</u> Derrick screens in sand and gravel industry, coal industry for fine coal recovery, sugar industry</p>
Fine Gold recovery from alluvial river sediments by gravity methods	<p>Name of assignment or project: <b>gold plant Kular, Siberia</b> Location: Russia Client: Kular Soloto . Positions held: Project Manager</p> <p>Fine gold gravitate recovery plant Flow sheet development, plant delivery, test work, commissioning, project management</p>
Water purification Perm / Unwa	<p>Name of assignment or project: <b>waste water purification with thickener</b> Location: Russia Client: LUK-Oil Perm Positions held: Project Manager.</p> <p>Delivery of 2 thickeners for water purification, lay out, plant delivery, commissioning</p>
Salt preparation with hydro cyclones and thickener	<p>Name of assignment or project: <b>salt thickening</b> Location: Russia Client: <u>Silvinit and Uralkali</u> Positions held: Project Manager. Consulting (thickeners and cyclones)</p>
Fines sand screening (wet)	<p>Name of assignment or project: <b>sand classification</b> Location: Spain</p> <p>Client: <u>Daytal Resources S.A.</u>, <u>Eusebio Echave S.A.</u>, <u>Silices Gilarranz S.A.</u></p> <p>Positions held: Project and Sales Manager. Derrick screens in sand industry</p>



Plant Audit (Recycling)	Name of assignment or project: <b>plant audit soil washing plant</b> Year: 2014 Location: Switzerland Client: <u>Eberhard Recycling</u> Positions held: Consultant. Audit of a soil wahing plant
Heavy Minerals recovery Consulting Flow sheet development	Name of assignment or project: <b>pre-feasibility (minerals preparation part)</b> Year: 2013 -ongoing Location: Turkey Client: Topkapi Positions held: Consultant Heavy minerals recover Consulting, flow sheet development, test work
Fine screening in kaolin, sand and gravel industry	Name of assignment or project: <b>kaolin protection screening, fine Sand screening</b> Location: U.K. Client: <u>WBB, IMERYS</u> Positions held: Sales Manager  Derrick screens in kaolin, sand and gravel industry
Salt screening (we)	Name of assignment or project: <b>salt screening</b> Location: U.K.  Client: <u>Cleveland potash</u> Positions held: Project Manager  Derrick screen test work
Kaolin plant revamping, Fine screening of kaolin and sand	Name of assignment or project: <b>plant development <u>Gluchowezk</u></b> Location: Ukraine Client: <u>Kaolin plant Gluchowezk</u>  Positions held: Consultant, Project and Sales Manager  Consulting, test work, machinery delivery Derrick screens in kaolin industry
Plant Audit	Name of assignment or project: Audit Sandplant Münchwiehlen Year 2016 Location Münchwiehlen Schweiz Activity: Consulting , Plantaudit
Plant Audit	Name of assignment or project: Audit Sandplant Ottendorf Year 2016 Location Ottendorf Okrilla Client KBO Activity: Plant Audit

Led-zinc plant Audit	Name of assignment or project: Plant audit Location: Armenia Stepanavan Client: Sagamar
<b>Africa</b>	
Glass sand purification Consulting	Name of assignment or project: <b>glass sand purification</b> Year: 1996-1998 Location: Egypt Client <u>Z-Overseas</u>  Positions held: Project Manager. Consulting for glass sand plant
Project planning, project management, geological and mineral data analysis, geochemical sampling, data base design, GIS, data processing, radiological evaluation	Name of assignment or project: Year: 1998- ongoing Location: Ghana Client: GMC Ghana Manganes Corp. Positions held: Project Manager. <u>(long term relations since 1998)</u>  <u>GMC</u> Consulting, flow sheet development, project management, plant and machinery delivery, test work, commissioning, after sales service  <u>Ghana Bauxite Company</u> Consulting, flow sheet development Several visits in different gold and diamond mines in Ghana
Project management, Equipment delivery commissioning Flow sheet development	Name of assignment or project: <b>pyrochlor recovery</b> Year: 2002-2003 Location Congo Client: <u>Masingiro Pyrochlor Plant</u>  Positions held: project engineer  Main project features: Flow sheet for cyclone station (more than 250 cyclone installations) delivery, test work, commissioning
Project management, flow sheet development, plant development, test work	Name of assignment or project: <b>small scale mining and beneficiation</b> Year: 2002 -2004 Location: Rwanda Client: NMC Metallurgie SARL Main project features: Planning of a small scale gravity tin concentrating plant in Kigali project finally not realised flow sheet development, plant development, test work
Project management, flow sheet development,	Year: 1995- 2012 Location: Morocco

<p>plant development, test work Plant and equipment sales</p>	<p>Main project features: Positions held: Project engineer, Sales engineer More than 17 years working on different projects in Morocco</p> <p><b><u>ONA-Group:</u></b> <u>Silver plant Imiter</u> Plant audit, consulting, test work <u>Cobalt plant Bou Azzer</u> Flow sheet development, plant audit, machinery delivery (cyclones and spirals), test work, consulting <u>Akka Gold mine</u> Consulting</p> <p><b><u>OCP Phosphate – group:</u></b> <u>Khouribga phosphate washing plant</u> Consulting, plant audit, machinery delivery, test work <u>Phosbukra el Laâjouné</u> Consulting, plant audit, test work, machinery delivery</p> <p><b><u>IMACID</u></b> Derrick screens in phosphoric acid plant</p> <p><b><u>Pakistan-Morocc-Phosphate</u></b> Derrick screens in phosphoric acid plant</p> <p><b><u>Bunge-Morocc-Phosphate</u></b> Derrick screens in phosphoric acid plant</p>
<p>Equipment sales Consulting</p>	<p>Name of assignment or project : <b>iron ore screening</b> Year: 2011 Location: Mauritania Client: SNIM Positions held: sales manger Activities performed:</p> <p>Derrick screens in wet and dry screening of iron ore, consulting, machinery delivery, test work</p>
<p>Project management, flow sheet development, plant development, test work Plant and equipment sales</p>	<p>Name of assignment or project: <b>tantalite recovery</b> Year: 1992-1993 Location: Mozambique Main project features: Glass sand purification plant for CoCa Cola in Maputo Plant delivery, test work, flow sheet development</p> <p><b><u>Morrua Tantalite plant</u></b> Consulting</p> <p>Positions held: Sales engineer</p>
<p>Consulting</p>	<p>Name of assignment or project: Year: 2003 Location: Namibia Client: KHA Germany Activities performed:</p>

	<p>Consulting for German company KHA for different projects  Karola Mine (Tantalite)  Maroela-Mine (Tantalite)  Mybergh Mine (Tantalite)</p> <p>Positions held: Consultant</p>
Sales Consulting	<p>Name of assignment or project:  Year: 2005  Location: South Africa  Positions held: Sales engineer, Consultant</p> <p>Client:</p> <p style="padding-left: 40px;"><u>Bayer Chrome Mine</u>  Delivery of upstream classifier, Consulting</p> <p style="padding-left: 40px;"><u>Ndeble Kaolin Mine</u>  Consulting</p> <p style="padding-left: 40px;"><u>XSTA-Chromium Mine</u>  Consulting</p> <p>Positions held: Consultant</p>
Consulting	<p>Name of assignment or project: <b>minerals preparation</b>  Year: 2004  Location: Uganda  Client:</p> <p style="padding-left: 40px;"><u>Wampewo Tantalite Mine</u>  Consulting</p> <p style="padding-left: 40px;"><u>Mwirasandu Tin Mine</u>  Consulting</p> <p>Positions held: Consultant</p>
Consulting	<p>Name of assignment or project: <b>heavy minerals recovery</b>  Year: 2012- ongoing  Location: Liberia  Client: Exploration Group Monrovia  Positions held: consultant  Activities performed: Test work, flow sheet development</p>
Gold plant	<p>Name of assignment or project: <b>Gold plant revamping</b></p>

Audit	Year 2018 - ongoing Location: Mali Consultant
<b>ASIA</b>	
Test work Flow sheet development Plant design Sales	<p>Name of assignment or project: <b>kaolin plant Sherkate</b>  Year: 1997-1990  Location: Iran  Client: Sherkate Kaolin  Positions held: Project Engineer  Activities performed:  Flow sheet development, plant lay out, plant delivery, test work, commissioning, project management</p> <p style="text-align: center;"><u>Zhiaratnia Gold Mine</u> Consulting</p>
Consulting	<p>Name of assignment or project: <b>kaolin</b>  Year: 2005  Location: Jordan  Client: Jordan Kaolin  Positions held: Consultant  Activities performed:  Consulting in kaolin and phosphate industry</p>
Test work Flow sheet development Plant design Sales Consulting, Audit	<p>Name of assignment or project:  Location: Kazakhstan  Client:  Positions held: Project Engineer, Consultant  Activities performed</p> <p style="text-align: center;"><u>Scheremsky GOG</u>  Manganese plant for fine manganese recovery  flow sheet development, plant lay out, plant delivery, test work,  commissioning, project management</p> <p style="text-align: center;"><u>Donsky GOG</u>  Chromium plant for fine chromium recovery  Flow sheet development, plant lay out, plant delivery, test work,  commissioning, project management</p> <p style="text-align: center;"><u>Lisakowsky iron ore plant</u>  Consulting: cyclones in milling circuits</p> <p style="text-align: center;"><u>SSGPO</u>  Consulting: cyclones in milling circuits</p> <p style="text-align: center;"><u>Kazax Minerals / MKK / MIBRAG iron ore project</u>  Audit, Flowsheet development with high pressure roller press (Koeppern) 2013</p>

Consulting	Name of assignment or project: Year: 2005 Location: Singapore / Malaysia Client: Positions held: Consultant Activities performed <u>Iron ore plant Bukit-Besi Malaysia</u> Consulting  <u>Bauxite plant SG-Reggit</u> Consulting  <u>Sibelco Asia</u> Consulting
Test work Flow sheet development Plant design Sales Consulting, Audit	Name of assignment or project Location: Uzbekistan Client: Positions held: Project Engineer, Consultant Activities performed <u>Kaolinplant Angren</u> Flow sheet, lay out, plant delivery, test work, commissioning, project management, after sales service  <u>Dobersek phosphate washing plant Novau</u> Cyclone plant lay out, machinery delivery, test work Derrick screen installation
Test work Consulting	Name of assignment or project: <b>kaolin beneficiation</b> Location: Vietnam Client: Kaolin Dong Hoi, Skoda Pilsen Positions held: Activities performed <u>Kaolin Plant Dong Hoi</u> Consulting, test work
Audit	Name of assignment or project: <b>Abu Dabbab Tantalite</b> Year 2017 Location: Agypt Activity: Document-Audit
Coal preparation plant Coordination of commissioning	Name of assignment or project: start-up of coal preparation plant Location: Russia, Novokuznezk Position held. Coordinator commissioning
<b>AMERICA</b>	
Consulting	Name of assignment or project Year 2000

	<p>Location: Cuba  Client: Geominera, PAB Bautzen  Positions held: consultant  Activities performed</p> <p style="text-align: right;"><u>Geominera (public institution)</u>  Consulting for the following mines  <u>Barita gold mine</u>  <u>Florentina gold mine</u>  <u>Golden Hill</u>  <u>Bentonit – el Cobre</u>  <u>Bentonit Havana</u>  <u>Minbas Calcium Carbonate (EMHM)</u>  <u>Research Center CIPIMM</u></p>
<p>Sales  Consulting  Project management</p>	<p>C  Year: 2006 -2012  Location: USA  Client: Derrick Corp.  Positions held: Sales Manager Europe, Rep 2012-ongoing  Activities performed  Sales Manager Derrick Corporation Buffalo NY</p>
<p>Audit</p>	<p>Name of assignment or project: Lithium Canada  Year 2018  Activity: Document-Audit</p>
<b>SOUTH AMERICA</b>	
<p>Consulting  Commissioning</p>	<p>Name of assignment or project  Year. 2014- ongoing  Location: Peru  Client:  Positions held:  Activities performed</p> <p style="text-align: right;"><u>Brexia, el Brocal an 18.000 t/d led and zinc mine</u>  Audit, test work, plant erection (partly),  commissioning (support)</p> <p style="text-align: right;"><u>Goldplata, 300 t/d led – zinc-gold-silver-copper min</u>  Audit, test work,</p>

## 17. Other information

### **Publications (extract)**

- Uwe Bruder, Historische Verfahren zur Erzaufbereitung im Erzgebirge, Raum Schneeberg Erzmetall, World of Metallurgy 3/2018

- Uwe Bruder, Siebmaschinen und Siebbeläge  
Recycling und Rohstoffe, Karl J. Thome-Kozmiensky und Daniel Goldmann  
Band 8 (2015)
- Uwe Bruder, Abtrennung von Feinkorn mit Siebtechnik  
Recycling und Rohstoffe, Karl J. Thome-Kozmiensky und Daniel Goldmann  
Band 2 (2009)
- Uwe Bruder, Neue Produkte für die Trockensiebung  
AT Mineral Processing 01/2014
- Dr. Stefan Buntenbach, Uwe Bruder Aufbereitung mineralogischer Rohstoffe in Afrika – eine Herausforderung für den deutschen Anlagenbau  
AT Mineral Processing 03/2003
- Uwe Bruder, Verwertung von Abgängen aus der Manganerzaufbereitung der Ghana Manganese  
AT Mineral Processing 05/1999
- Hermann Fink, Uwe Bruder, Gerhards Kellner, Aufbereitung von Bims am Beispiel der neuen Anlage der Firma Rotec im Neuwieder Becken  
AT Mineral Processing 09/2001
- Uwe Bruder, High Tech – Derrick Feinsiebmaschinen für die Nass und Trockensiebung in der Sand und Kiesindustrie  
AT Mineral Processing 03/2010

Participation and papers in several conferences in:

Germany, Russia, Poland, Czech Republic, Romania, South Africa, Turkey, USA, Ghana, Morocco,

Training / education

Lectures at the Zittau University - Hydro cyclones and screen lecture

Stuff training Derrick representatives

### **18.Certification:**

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.

Uwe Bruder

\_\_\_\_\_ Date: 06/11/2018 .

*[Signature of staff member or authorized representative of the firm]* Day/Month/Year

Full name of authorized representative: