

## CV

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| Name                     | Janne Hanka   |  |
| Year of birth            | 1984  |  |
| Education                | Master of Science (Technology), Structural Engineering and Building Technology<br>Aalto University (2012)   |  |
|                          | BEng. (Building Engineering)<br>Helsinki Polytechnic Stadia (2008)  |  |
| Years of work experience | 15  |  |
| Job title                | Chief Specialist  |  |
| Key qualifications       | Prestressed concrete structures: watertight tanks, transfer structures, parking houses, yard decks<br>Strengthening design of existing structures<br>External inspector of structural designs |  |
| Language skills          | Finnish, English, Swedish   |  |

### Work Experience

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| 2020–     | RakenneStudio Oy / Structural Studio Ltd               | Chief Specialist, Partner                                   |
| 2019–2020 | Sweco Structures Ltd, Bridges                          | Department Manager  |
| 2015–2018 | Sweco Structures Ltd, Prestressed concrete structures  | Project Manager   |
| 2012–2015 | Sweco Industry, Plant Engineering                      | Structural Engineer   |
| 2011–     | Aalto University, Department of Structural Engineering | Lecturer, reinforced and post-tensioned concrete structures |
| 2007–2012 | Citec Engineering Oy Ab                                | Concrete Designer   |
| 2006      | Optiplan Oy  | Trainee / Junior Engineer                                   |
| 2004-2006 | NCC  | Construction worker   |

### Qualifications

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| 2020 | FISE certification grade V+ (Difficult)<br>External inspector of structural designs (until 04.06.2027)      |
| 2018 | FISE certification grade PV (Exceptionally difficult)<br>Designer of concrete structures (until 28.11.2025) |

## Courses

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|---------------------|--|
| 2019                | Sweco Academy - Manager training programme   |
| 2019                | TEK Nuorten osajien Forum training 10.12.2018-24.04.2019   |
| 2016                | Imperial College London: Post-tensioning Design and Construction                                 |
| 2016, 2018,<br>2019 | BY/RIL Prestressed Concrete course, Lecturer   |
| 2016–2018           | BY/RIL Site Manager for cast-in-situ concrete structures course, Lecturer (Composite structures) |
| 2016                | Sweco Academy - Project Manager training   |

## Memberships

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| Tekniikan Akateemiset TEK (Academic Engineers and Architects in Finland) |
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## Publications

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| BY 69 Unbonded tendons in concrete structures (2016), Author of the calculation example  |
| Master's Thesis: Validation of a standardized design method of loadbearing Siporex-slabs of autoclaved aerated concrete (2011) |

## Awards

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| Concrete Structure of 2018, Amos Rex  |
| RIL Award 2018, Amos Rex Art Museum   |
| RIL Award, Fund of Fabian Ahvenainen and Oskari Vilamo:<br>Master's Thesis: Validation of a standardized design method of loadbearing Siporex-slabs of autoclaved aerated concrete (2011) |

## Notable projects

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|---------------|--|--|
| 2019–<br>2020 | <b>Lippulaiva Bus terminal (Espoo)</b><br>Design of post-tensioned transfer slabs  | Responsible Engineer<br>Grade: Difficult                               |
| 2016–<br>2018 | <b>Ainoa3 (Espoo)</b><br>Post-tensioned horizontal structures and transfer slabs (41000 m <sup>2</sup> )   | Project Manager<br>Grade: Exceptionally difficult                      |
| 2016–<br>2017 | <b>Amos Anderson Art Museum (Helsinki)</b><br>Concrete domes (diameter 36 m and 25 m) supported with post-tensioned beams.   | Structural Engineer, Project Manager<br>Grade: Exceptionally difficult |
| 2015–<br>2016 | <b>Metsä Fibre (Äänekoski)</b><br>Post-tensioned wastewater tanks (D=100 m, h=12 m and D=86 m, h=6 m)  | Structural Engineer, Project Manager<br>Grade: Exceptionally difficult |
| 2013–<br>2015 | <b>Neste Jacobs Oy TL3 (Porvoo)</b><br>Design of concrete structures for the Turnaround 2015 stoppage. Strengthening design of tabletop structure with prestressed tendons. Analysis and strengthening design of old pipe bridges. | Structural Engineer, Project Manager<br>Grade: Exceptionally difficult |

## Projects

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|---------------|--|--|
| 2024          | <b>As Oy Havuaukio (Turku)</b><br>Review of balcony railings and glazing's.  | 3 <sup>rd</sup> party inspector of structural designs        |
| 2024          | <b>Vanha Helsingintie 20 (Helsinki, Malmi)</b><br>Review of balcony railings and glazing's.  | 3 <sup>rd</sup> party inspector of structural designs        |
| 2023          | <b>As Oy Heidi ja As Oy Eloisa (Järvenpää)</b><br>Review of balcony railings and glazing's. Inspection of old delaminated balcony glazing's.   | 3 <sup>rd</sup> party inspector                              |
| 2023-         | <b>Pasila Tulistimentie (Helsinki)</b><br>External inspector of 3 housing buildings structural frame: 16, 13 and 15 storeys.   | 3 <sup>rd</sup> party inspector of structural designs        |
| 2023          | <b>As Oy Helsingin Sinkkivälke (Helsinki)</b><br>Design of post-tensioned deck slab. (734m <sup>2</sup> )  | Structural Designer<br>Grade: Difficult+                     |
| 2023          | <b>KOy Tonttulaakson pysäköinti (Espoo)</b><br>Design of post-tensioned deck slab. (3451m <sup>2</sup> )   | Structural Designer<br>Grade: Difficult+                     |
| 2023          | <b>Geologian tutkimuslaitos (Espoo)</b><br>Strengthening design of old concrete beam-frame   | Structural Designer<br>Grade: Difficult+                     |
| 2023          | <b>As Oy Hellikki (Helsinki)</b><br>Review of balcony railings and glazing's.  | 3 <sup>rd</sup> party inspector of structural designs        |
| 2023          | <b>As Oy Erika (Helsinki)</b><br>Review of balcony railings and glazing's.   | 3 <sup>rd</sup> party inspector of structural designs        |
| 2023          | <b>KOy Ylioppilashuone Alina (Helsinki)</b><br>Review of balcony railings and glazing's.   | 3 <sup>rd</sup> party inspector of structural designs        |
| 2023          | <b>Gunillatie 3 (Helsinki)</b><br>Design of post-tensioned deck slab. (1227m <sup>2</sup> )  | Project Manager<br>Grade: Difficult+                         |
| 2023          | <b>As Oy Kruunuvuorenrannan Kajo (Helsinki)</b><br>External inspector of designs and execution of a precast housing building (8 stories)   | 3 <sup>rd</sup> party inspector of structural designs        |
| 2023          | <b>Stora Enso Oulu, bioproduct mill (Oulu)</b><br>External auditor and review of post-tensioned tanks design and execution   | Contractors Engineer   |
| 2023          | <b>As Oy Helsingin Ultramariini (Helsinki)</b><br>External inspector of precast housing building (6 storeys)   | 3 <sup>rd</sup> party inspector of structural designs        |
| 2022-         | <b>Käskynhaltijantie parking (Espoo)</b><br>Main structural engineering design for multistorey parking hall. Total floor area 7332 m <sup>2</sup> and 6 floors. Beam-slab frame. Precast brickwall facades. Steel roof consisting of loadbearing steel sheets and steel trusses. | Responsible head<br>Structural Engineer<br>Grade: Difficult+ |
| 2022-         | <b>Finnoo Maren, parking structure (Espoo)</b><br>Main structural engineering and post-tensioning design for deck slab (11 817 m <sup>2</sup> )  | Responsible head<br>Structural Engineer<br>Grade: Difficult+ |
| 2022-<br>2024 | <b>Datacenter (Espoo)</b><br>Alteration design of a warehouse to datacenter use. Main structural engineer tasks. Footprint 4000 m <sup>2</sup> .   | Responsible head<br>Structural Engineer<br>Grade: Difficult  |
| 2022          | <b>Warehouse and logistics, Lommila (Espoo)</b><br>External inspector of structural designs for a warehouse made of precast concrete elements. Area 16 600m <sup>2</sup> .   | External Inspector<br>Grade: Difficult+                      |
| 2022          | <b>Henttaa Puistokatu 4, parking structure (Espoo)</b><br>Design of post-tensioned deck slab (1454 m <sup>2</sup> ).   | Project manager<br>Grade: Difficult+                         |

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| 2022        | <b>As Oy Särkiniemenpuisto, parking structure (Helsinki)</b><br>Design of post-tensioned deck slab and intermediate floor (1873 m <sup>2</sup> ) | Project manager<br>Grade: Difficult+              |
| 2022        | <b>As Oy Särkiniemenpuisto (Helsinki)</b><br>External inspector of a housing building and underground parking hall designs.                      | External Inspector<br>Grade: Difficult+           |
| 2022        | <b>Berthan Portin pysäköinti 2 (Helsinki)</b><br>Design of post-tensioned deck slab, transfer slab and intermediate floor (1934 m <sup>2</sup> ) | Structural Engineer<br>Grade: Difficult+          |
| 2022        | <b>As Oy Aallonharja (Jyväskylä)</b><br>Design of post-tensioned deck slab and intermediate floor (1900 m <sup>2</sup> )                         | Project manager<br>Grade: Difficult+              |
| 2022        | <b>As Oy Aura and Vanamo (Espoo)</b><br>Design of post-tensioned deck slab. (2019 m <sup>2</sup> )   | Designer and Project manager<br>Grade: Difficult+ |
| 2022        | <b>As Oy Meander, parking structure (Helsinki)</b><br>Design of post-tensioned deck slab (2030 m <sup>2</sup> )                                  | Structural Engineer<br>Grade: Difficult+          |
| 2022        | <b>Kettutie parking structure (Helsinki)</b><br>Design of post-tensioned deck slab (1530 m <sup>2</sup> )  | Structural Engineer<br>Grade: Difficult+          |
| 2021        | <b>As Oy Jätkäsaari Samoankuja (Helsinki)</b><br>Design of post-tensioned transfer beams   | Responsible Engineer<br>Grade: Difficult          |
| 2021        | <b>Vantaan Rasti (Vantaa)</b><br>Logistics center. Design of steel frame and foundations   | Designer. Grade:<br>Exceptionally difficult       |
| 2021-2022   | <b>KOy Sävelkortteli parking hall (Helsinki)</b><br>Design of post-tensioned transfer beams and floors (3 509 m <sup>2</sup> )                   | Responsible Engineer<br>Grade: Difficult          |
| 2021        | <b>As Oy Helsingin Julius (Helsinki, Gyldenintie 2)</b><br>External inspector of precast housing building and parking carage                     | External Inspector<br>Grade: Difficult            |
| 2021-(2022) | <b>Metsä Fibre Kemi bioproduct mill (Kemi)</b><br>External auditor and review of post-tensioned tanks design and execution                       | Contractors Engineer                              |
| 2021        | <b>Karakallion Joutsenhanke (Espoo)</b><br>Design of post-tensioned deck slab  | Responsible Engineer<br>Grade: Difficult          |
| 2021        | <b>As Oy Niittykummun riihitonttu (Espoo)</b><br>Design of post-tensioned deck slab  | Responsible Engineer<br>Grade: Difficult          |
| 2021        | <b>KOy Helsingin Jokiniementie Parking (Helsinki)</b><br>Design of post-tensioned floors   | Responsible Engineer<br>Grade: Difficult          |
| 2021        | <b>Delfiinikortteli, Parking hall (Helsinki, Vuosaari)</b><br>Design of post-tensioned floors and deckslab.                                      | Responsible Engineer<br>Grade: Difficult          |
| 2021        | <b>KOy Vallila Park (Helsinki)</b><br>External inspector of a underground parking hall designs   | External Inspector<br>Grade: Difficult            |
| 2021        | <b>As Oy Helsingin Bysantti (Helsinki, Harjannetie 30)</b><br>External inspector of a precast parking hall designs.                              | External Inspector<br>Grade: Difficult            |
| 2021        | <b>Uumajan bridge, repair project (Uumaja)</b><br>Designer of foundations and concrete structures required to repair the bridge                  | Designer<br>Grade: Difficult                      |
| 2021        | <b>As Oy Charlotta ja Fanny (Porvoo)</b><br>Design of the post-tensioned transfer beams between parking hall and housing building.               | Designer<br>Grade: Difficult                      |

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| 2020-2021 | <b>As Oy Monumentti and As Oy Siluetti (Helsinki)</b><br>External inspector of precast housing structure (15 stories) and (14 stories) structural designs and site inspections of the reinforcement works. | External Inspector<br>Grade: Difficult                 |
| 2020-2022 | <b>Kilpilahti Power Plant – Repair project (Porvoo)</b><br>External inspector of repair design for new power plant   | External Inspector<br>Grade: Difficult                 |
| 2020      | <b>JAKO BETONI.</b> Product development and design of post-tensioned precast cylindrical tank for agricultural use   | Responsible Engineer<br>Grade: Exceptionally difficult |
| 2020-2021 | <b>Vantaan Rasti (Vantaa)</b><br>Design of the steel trusses and stability for a warehouse   | Steel Designer<br>Grade: Exceptionally difficult       |
| 2020      | <b>GWS (Helsinki)</b><br>Design of the stability for a parking hall.   | Designer<br>Grade: Difficult                           |
| 2020-2021 | <b>KOy Feenix Parking (Espoo) - JJ-rakenteet</b><br>Design of post-tensioned beams and slabs   | Responsible Engineer<br>Grade: Difficult               |
| 2020      | <b>Rakennusteollisuus RT ry</b><br>Member of national commentary group RTT/SR 20/AK02 (Design of concrete)   | Author of the comparison calculations for the Eurocode |
| 2020      | <b>Betoniyhdistys By ry, Betonitietosivusto</b><br>Content provider for Concrete Association of Finland – Post-tensioned structures  | Content provider                                       |
| 2020      | <b>Myllyparkki (Turku)</b><br>Inspection and report for horizontal post-tensioned structures (declaration of conformity)   | External Inspector<br>Grade: Difficult                 |
| 2020      | <b>Salmisaari (Helsinki)</b><br>Preliminary design of a concrete pontoon for a floating small residential building   | Structural Engineer<br>Grade: Difficult                |
| 2020      | <b>Kalatatama (Helsinki)</b><br>Preliminary design of a concrete pontoon for a floating five storey residential building   | Structural Engineer<br>Grade: Exceptionally difficult  |
| 2020      | <b>Mahtiparkki 626 (Espoo)</b><br>Internal inspection of a post-tensioned transfer structure   | Inspector<br>Grade: Difficult                          |
| 2020      | <b>As Oy Töölön kesäkatu (Helsinki)</b><br>External inspection of transfer beams (strengthening of existing structures)  | External Inspector<br>Grade: Difficult                 |
| 2019      | <b>Postipuun lastensuojelupalvelut (Espoo)</b><br>Post-tensioned transfer beams (spans 15 m and 14 m)  | Responsible Engineer<br>Grade: Difficult               |
| 2019      | <b>Stora Enso OCO (Oulu)</b><br>Preliminary and construction phase design for post-tensioned concrete tanks (D=40 m, h=9 m and D=41 m, h=4 m)  | Project Manager<br>Grade: Exceptionally difficult      |
| 2019      | <b>E18 Bridges</b><br>External inspector of structural designs   | Inspector<br>Grade: Difficult                          |
| 2019      | <b>Kuhansalontie Bridge (Joensuu)</b><br>External inspector of structural designs  | Inspector<br>Grade: Difficult                          |
| 2019      | <b>LETKE Bridge S6</b><br>External inspector of structural designs   | Inspector<br>Grade: Difficult                          |
| 2019      | <b>Eliei Saarisen tie 42 (Helsinki)</b><br>Post-tensioned yard deck (996 m <sup>2</sup> )  | Responsible external inspector<br>Grade: Difficult     |

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| 2019–<br>2020 | <b>Lippulaiva Bussiterminaalilohko (Espoo)</b><br>Design of post-tensioned transfer slabs   | Responsible Engineer<br>Grade: Difficult              |
| 2019          | <b>As Oy Kreivi, Herttua ja Markiisi (Kauniainen)</b><br>Post-tensioned beams and slabs (2090 m <sup>2</sup> )  | Responsible Engineer<br>Grade: Difficult              |
| 2019          | <b>As Oy Portus (Helsinki)</b><br>Post-tensioned beams and slabs (2070x2=4170 m <sup>2</sup> )  | Structural Engineer<br>Grade: Difficult               |
| 2019          | <b>As Oy Harjus, Smoltti ja Klossi (Helsinki)</b><br>Post-tensioned beams and slabs (800 m <sup>2</sup> )   | Project Manager<br>Grade: Difficult                   |
| 2019          | <b>Telakkaranta (Helsinki)</b><br>Post-tensioned structures (2800x3=8400 m <sup>2</sup> )   | External Inspector<br>Grade: Difficult                |
| 2019          | <b>Tesoma (Tampere)</b><br>Post-tensioned beams and slabs (2298 m <sup>2</sup> )  | Project Manager<br>Grade: Difficult                   |
| 2018          | <b>Santos Park korjaus (Helsinki)</b><br>Design of repair works for post-tensioned parking slab (200 m <sup>2</sup> )   | Structural Engineer<br>Grade: Difficult               |
| 2018          | <b>Topaasiparkki (Helsinki)</b><br>Post-tensioned beams and slabs (6500 m <sup>2</sup> )  | Structural Engineer<br>Grade: Difficult               |
| 2018          | <b>Tripla (Helsinki)</b><br>Deformation and bracing design of load transfer level for the new station building (4000 m <sup>2</sup> )                         | Structural Engineer<br>Grade: Exceptionally difficult |
| 2017–<br>2019 | <b>Hertsi Herttoniemi (Helsinki)</b><br>Post-tensioned horizontal structures and transfer slabs (10 900 m <sup>2</sup> )                                      | Project Manager<br>Grade: Exceptionally difficult     |
| 2016–<br>2018 | <b>Ainoa3 (Espoo)</b><br>Post-tensioned horizontal structures and transfer slabs (41 000 m <sup>2</sup> )   | Project Manager<br>Grade: Exceptionally difficult     |
| 2016–<br>2020 | <b>Raitinkartano (Espoo)</b><br>Post-tensioned horizontal structures and transfer slabs (12 500 m <sup>2</sup> )  | Project Manager<br>Grade: Exceptionally difficult     |
| 2018          | <b>Neste Jacobs Oy Jätevedenkäsittely (Porvoo)</b><br>Post-tensioned concrete tanks   | External Inspector<br>Grade: Difficult                |
| 2017          | <b>Korvatunturintie 8 (Espoo)</b><br>Post-tensioned beams and slabs   | Structural Engineer<br>Grade: Difficult               |
| 2017          | <b>Pumppupuisto autohalli (Espoo)</b><br>Post-tensioned beams and slabs   | Structural Engineer<br>Grade: Difficult               |
| 2017          | <b>Flamingo Wing (Vantaa)</b><br>Cast-in-situ transfer beams (1440 m <sup>2</sup> )   | Project Manager<br>Grade: Exceptionally difficult     |
| 2017          | <b>Olympiastadion (Helsinki)</b><br>Post-tensioned slabs (2000 m <sup>2</sup> )   | Structural Engineer<br>Grade: Difficult               |
| 2017          | <b>Metsä Fibre (Äänekoski)</b><br>Post-tensioned wastewater tanks (D=80 m and h=8 m)  | Project Manager<br>Grade: Exceptionally difficult     |
| 2017          | <b>Lahti Aqua Määdättämösäiliöt (Lahti)</b><br>Stress analysis, strengthening design and risk assessment for existing post-tensioned concrete tanks.          | Structural Engineer<br>Grade: Exceptionally difficult |
| 2016          | <b>Neste Jacobs Oy Jätevedenkäsittely (Porvoo)</b><br>Preliminary design for post-tensioned concrete tanks (2x10000 m <sup>3</sup> ja 2x3200 m <sup>3</sup> ) | Project Manager<br>Grade: Exceptionally difficult     |



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| 2016          | <b>Aviapolis (Vantaa)</b><br>Preliminary design for post-tensioned transfer slabs  | Structural Engineer<br>Grade: Exceptionally difficult                  |
| 2016          | <b>Marinkallio (Espoo)</b><br>Post-tensioned yard deck (2800 m <sup>2</sup> )  | Structural Engineer<br>Grade: Difficult                                |
| 2016          | <b>Isosaarentien 2 (Helsinki)</b><br>Post-tensioned yard deck  | Structural Engineer<br>Grade: Difficult                                |
| 2016–<br>2017 | <b>Amos Andersonin taidemuseo (Helsinki)</b><br>Concrete domes (diameter 36 m and 25 m) supported with post-tensioned beams.   | Structural Engineer, Project Manager<br>Grade: Exceptionally difficult |
| 2015–<br>2016 | <b>Metsä Fibre (Äänekoski)</b><br>Post-tensioned wastewater tanks (D=100 m, h=12 m and D=86 m, h=6 m)  | Structural Engineer, Project Manager<br>Grade: Exceptionally difficult |
| 2015          | <b>Kehä I Keilaniemen tunneli (Espoo)</b><br>Preliminary design for a blast loaded concrete tunnel (L=220m)  | Structural Engineer<br>Grade: Exceptionally difficult                  |
| 2015          | <b>Villa Breda (Espoo)</b><br>Post-tensioned yard deck (875 m <sup>2</sup> )   | Structural Engineer<br>Grade: Difficult                                |
| 2012–<br>2016 | <b>Neste Jacobs Oy (Porvoo)</b><br>Lead concrete designer in various concrete structures to the oil refinery area. Predesign and project supervision of water treatment plant. Designer in new and renovation of old pipe bridge foundations<br>Project manager in cable trench (600m) design project. | Project Manager<br>Grade: Difficult                                    |
| 2013–<br>2015 | <b>Neste Jacobs Oy TL3 (Porvoo)</b><br>Design of concrete structures for the Turnaround 2015 stoppage. Strengthening design of tabletop structure with prestressed tendons. Analysis and strengthening design of old pipe bridges.   | Structural Engineer, Project Manager<br>Grade: Exceptionally difficult |
| 2013–<br>2015 | <b>Hakan Peat Power Plant (Rwanda)</b><br>Owners Engineer consultant work in Structural and Civil Engineering. Preparing of bidding invitation documents for EPC and Boiler candidates. Comparing technical and cost differences between the EPC candidates. Negotiations with EPC candidates.         | Project Manager<br>Grade: Difficult                                    |
| 2013,<br>2014 | <b>Aaba pelikentät (Helsinki)</b><br>Design of screw-piled concrete foundations for air domes to Pajamäki (66m x 46m) and Töölö P7 (91m x 61m).  | Structural Engineer<br>Grade: Difficult                                |
| 2012–<br>2014 | <b>Neste Jacobs Oy (Porvoo)</b><br>Sewage tank renovation. Concrete Lead Engineer. Design of new concrete sewage tank (340m <sup>3</sup> ). Renovation and expansion of old underground concrete sewage tanks.   | Structural Engineer<br>Grade: Exceptionally difficult                  |
| 2013          | <b>ST1 (Kajaani)</b><br>Preliminary design for steel-, concrete- and envelope structures for cost estimation of new Ethanol plant. Utilization of building information modeling in de-sign, modeling and quantification using Tekla Structures.  | Structural Engineer<br>Grade: Difficult                                |

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| 2013          | <b>Talvivaara (Kajaani)</b><br>Expansion of a gas cleaning building (809 m <sup>2</sup> ). Responsible engineer of steel- and concrete structures. Design of foundations with Tekla Structures. Analysis and design of steel structures. (809 m <sup>2</sup> )   | Responsible Engineer<br>Grade: Difficult                    |
| 2012–<br>2013 | <b>Keravan Lämpövoima Oy (Kerava)</b><br>Expansion of a fuel house: Laboratory (420m <sup>3</sup> ) and hall (2000m <sup>3</sup> ) buildings. Steel- and concrete structures lead engineer. Design of foundations and precast elements with Tekla Structures. Analysis and design of steel structures.   | Responsible Engineer<br>Grade: Difficult                    |
| 2012          | <b>Oy AGA AB (Riihimäki)</b><br>Medicinal Gas Filling. Lead designer for concrete and steel structures for an expansion of an industrial facility.   | Structural Engineer<br>Grade: Difficult                     |
| 2012,<br>2013 | <b>ST1 (Hamina, Vantaa, Göteborg, Kajaani)</b><br>Structural engineering for petrochemical plant sites. Analysis of an old conveyor bridge. Predesign of steel structures for a distillation colon (h=30m). Design of concrete structures for an expansion of handling facility. Renovation design of large spanning (span=25m) pipe bridge. Renovation design of steel crane beams. | Structural Engineer<br>Grade: Difficult                     |
| 2011–<br>2015 | <b>H+H Finland Oy</b><br>Developer of calculation programs for slab and beam elements made of autoclaved aerated concrete.   | Structural Engineer<br>Grade: Difficult                     |
| 2011          | <b>IKANO (Kuopio)</b><br>Shopping cen. Pre-design of bracing and precast floors for a large (49000m <sup>2</sup> ) concrete-steel composite building frame.  | Structural Engineer<br>Grade: Difficult                     |
| 2010-<br>2011 | <b>Wärtsilä/Fortum (Loviisa)</b><br>Fortum Power and Heat, Emergency power plant. Lead Engineer of concrete design.  | Structural Engineer<br>Grade: Difficult                     |
| 2010          | <b>Neste Oil, Teboil ja St1 (Helsinki)</b><br>Kyläsaari Petrol stations. Lead engineer in a petrol station project. Design of shelters and tank foundations.   | Responsible head<br>Structural Engineer<br>Grade: Difficult |
| 2010          | <b>Wärtsilä, several projects</b><br>Design of concrete foundations for diesel- and gas powerplants to Europe, Africa, and South America.  | Structural Engineer<br>Grade: Difficult                     |
| 2008-<br>2011 | <b>SKOL Calculation sheet project according to Eurocodes</b><br>Developer of a calculation tool for biaxially bended concrete columns according to EC2.  |   |
| 2008-<br>2009 | <b>Viinikkala Logistics Center (Vantaa)</b><br>Design of fibre-reinforced concrete floors. Design of complementary concrete and steel structures.  | Structural Engineer<br>Grade: Difficult                     |