



Always well done

Portfolio



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Co-report about practical achievements in the construction

field confirmed by expert's opinions

This report summarizes most significant designs of Leszek Chodor in the field of constructing and building, approved by independent commissions. Leszek Chodor has a construction expert title with specialization in construction and building the scope of specialization includes buildings design. Presented designs are only a part of rich design achievements of Leszek Chodor.

2002: 2nd Prize in the Construction of the Year 2002 competition in category "industrial and commercial building sector"

Acryl Products and Bath Showers Plant CERSANIT II in Starachowice

Figure 1 shows information about the award in INFORMATOR MURATOR 2002. **Acryl Products and Bath Showers Plant** was located in Special Economic Zone in STARACHOWICE (ul. Bema 2). The building consists of a production plant, office and technical building. Total area is 8529m² and 8262m² floor area. Surface roads, maneuvering areas, parking and sidewalks area is equal to 13 600 m².

Main object is production hall with two production lines, raw materials and finished goods warehouse and another technical rooms. Hall has one floor, two naves with three parts with height of 6 and 8 m. The construction of the hall are columns pin-connected to steel trusses (height 1,35m). Roof covering of trapezoidal sheet isolated with mineral wool installed on polyethylene film. Floor – 20cm reinforced concrete slab, reinforced with dispersed fibres. The casing - panels with a core of rigid polyurethane foam.

The construction of the office building is traditional. Bearing walls are made of ceramic blocks Porotherm (25 cm) and reinforced concrete footings. The internal walls are gypsum plasterboards on a steel frame. Supporting structure of flat roof are prefabricated panels FILIGRAN, insulated with mineral wool, covering PVC foils. The whole investment took five months.

Nagroda II stopnia

BUDOWNICTWO
PRZEMYSŁOWE I HALOWE

Zakład Wyrobów Akrylowych i Wanien Prysznicowych CERSANIT II w Starachowicach

Inwestor: CERSANIT II SA Starachowice

Generalny wykonawca: Mostostal Siedlce SA Budownictwo

Dyrektor kontraktu: mgr inż. Daniel Lorenc

Kierownik budowy: mgr inż. Henryk Przybysz, inspektor nadzoru: mgr inż. Tomasz Piskulak

Główni projektanci: mgr inż. arch. Paweł Chromik (architektura),

dr inż. Leszek Chodor (konstrukcja)

Budowę do Konkursu zgłosili: inwestor i generalny wykonawca.

Zakład Wyrobów Akrylowych i Kabin Prysznicowych zlokalizowano w Specjalnej Strefie Ekonomicznej STARACHOWICE przy ulicy Bema 2. Obiekt składa się z zakładu produkcyjnego oraz zaplecza biurowo-technicznego i socjalnego. Jego powierzchnia zabudowy wynosi 8529 m², a powierzchnia użytkowa 8262 m². Powierzchnia dróg, placów manewrowych, parkingów i chodników jest równa 13 600 m².

Главным объектом jest hala produkcyjna, w której poza dwiema liniami produkcyjnymi wyrobów akrylowych znajdują się magazyny surowców i wyrobów gotowych, laboratoria i inne pomieszczenia techniczne. Hala jest obiektem jednokondygnacyjnym, dwunawowym, o trzech częściach wysokości 6 i 8 m. Konstrukcję hali stanowią słupy żelbetowe (40x40 i 45x45 cm) z betonu klasy B37, połączone przegubowo z wiązarami

stałowymi kratownicowymi wysokości 1,35 m. Pokrycie wykonano z blachy trapezowej i ocieplono wełną mineralną ułożoną na folii polietilenowej. Na wełnie ułożono folię PVC grubości 1,5 mm. Posadzkę hali wykonano w postaci płyty żelbetowej grubości 20 cm z betonu klasy B30 zbrojonej włóknami stalowymi. Obudowę hali stanowią płyty warsztawowe z rdzeniem ze sztywnej pianki poliuretanowej.

Konstrukcja budynku biurowego jest tradycyjna. Ściany nośne wykonano z pustaków ceramicznych PÖROTHERM grubości 25 cm, a lały fundamentowe z betonu klasy B20. Ściany wewnętrzne są gipsowo-kartonowe na stelażu stalowym.

Konstrukcję nośną stropodachu stanowią płyty prefabrykowane typu FLIGRAN, ocieplane wełną mineralną grubości 14 cm, z pokryciem folią PVC.

Całość inwestycji wykonano w ciągu 5 miesięcy.



KONKURS PZTB „BUDOWA ROKU 2002”

Figure 1 Information about the award in INFORMATOR MURATOR 2002

2007: Urban Land Institute Global Awards 2007 - Excellence of the Year 2007

Shopping Centre MANUFAKTURA in Łódź

Leszek Chodor was a leading construction designer of the main building No. 15. The usable floor area of building is approximately 97 000m². 3-floors reinforced concrete building with steel covering. Reinforced concrete part designed as monolithic, column and slab frame structure. Ceilings include holes for atriums and vertical communication (lifts and stairs). Horizontal communication between different areas provided by

curved steel footbridge with fire protection for 120 minutes. In the building are located commercial and services areas, including cinemas and gyms. Steel covering of the building is complex with many skylights and -interesting geometry.

The architect of this property was SUD Architects, and the investor was APSYS.

Figure No. 2 shows interior of the building with a view of atrium, fragments of footbridges with railings and one of the skylights. Photo reflects size of the object in a human scale.

An important engineering problem was the foundation of the objects in the valley of the river Łódka.

In order to ensure the strength and stability a series of special geotechnical solutions was used, including drilled piles, strengthen the ground injection, geotextiles, geogrids and the complex frame-slab system to overhang the object over the waterways.

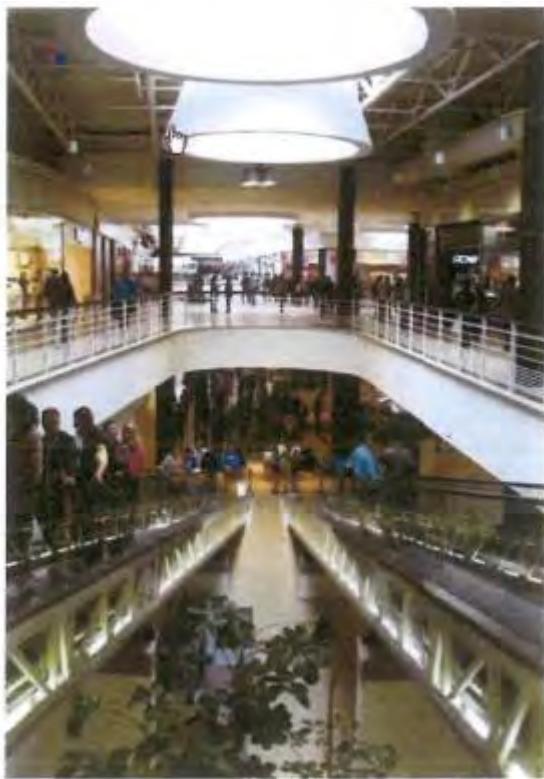


Figure 2 Interior of Manufaktura in Łódź.

Leszek Chodor – Leading construction designer

2007: 1st Award in the Construction of the Year 2007 competition in category “industrial and storage building sector”

Headquarters PSE Operator in Konstancin - Jeziorna

Leading designers were Czesław Bielecki – architecture, and Leszek Chodor with Mirosław Hodun – structure. Those designers are the authors of the conceptual and construction designs for the building permission. Executive design in reinforced concrete part – Franciszek Romańczuk. Executive design steel dome with ribs - Leszek Chodor - in the front part of objects. The dome is the architectural dominant of object.

The complex of buildings is composed of a main building with underground floor and three floors above ground. Especially important is the underground part, which includes strategic objects for the protection of the national energy. This part of the property is designed in a monolithic reinforced concrete and is intended for a nuclear attack and a terrorist. It contains special compartments. Due to complicated engineering-geological

conditions, high groundwater level and depression several meters underground part - it was necessary to use special methods of drainage, construction of the bath using diaphragms bentonite and cement grouting.

Another interesting element of the design is the "tail" of reinforced concrete overhang. Parts of the complex were clipped by glazed, ellipsoidal lobby with reception, meeting rooms and conference room for 200 people. This ellipsoidal dome was structurally the most interesting object form. The dome was designed as a rib and completely glazed. The basic function of the building was an office and a conference room.

The building design was constructed in 2004. Construction began in January 2005 and was completed in May 2008. The cost of construction was approx. 150 million zł. The opening of the building took place on 26 June 2008. Fig. 3 to 5 shows selected photographs of the object after commissioning.



Figure 3 Dome in Headquarters PSE Operator in Konstancin – Jeziorna
Leszek Chodor – Leading construction designer



Figure 4 Headquarters PSE Operator in Konstancin - Jeziorna



Figure 5 The back elevation

2016: Nomination for the Mies van der Rohe Award - Europe's most prestigious architecture competition.
The Witold Lutosławski National Forum of Music

The Witold Lutosławski National Forum of Music was nominated to the Ludwig Mies van der Rohe European prize. Leading designers were Ewa, Stefan Kuryłowicz – architecture, and Leszek Chodor – structure.

Among the 365 objects from 39 European countries there were 10 Polish, including the building of the National Forum of Music. At the end of January with a long list of projects selected is 40, and the five finalists will be announced in April.

The winner will receive a check for 60,000 euros and a statuette on May 26 in the Mies van der Rohe Pavilion in Barcelona. Award Mies van der Rohe is awarded every two years since 1988.



*Figure 6 The Witold Lutosławski National Forum of Music -
Leszek Chodor – Leading construction designer*

List of structure designs and inter-branch coordination

PhD Civil Eng. Eng. Arch. Leszek Bogusław Chodor born on 01.06.1955 in Cieplice - Jelenia Góra, from 1997 to 2008 he participated in preparation of the following architectural and construction projects.

No.	Specification of buildings The names and addresses of objects	project facilities /	Cubature / Area	Characteristic of the design Specification of the work	The period of performing from – to	The period [Months]	Technical function
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
1	Selected technical opinions for court: Technical opinion and valuation of the property, 1995. Local Court, Civil Division in Kielce Technical opinion on the IC 1405/95. Works done by TANBUD (Z.Cisowski) on MJ Fedorczak house construction in Podgóród, 1996. Local Court, Civil Division in Kielce Technical opinion and valuation of real estate Kielce, ul. Łódzka 304a, Ref. Act VII NS 653/95, Local Court, Civil Division in Kielce, Technical opinion and valuation of the apartment which is the division of property (Case 1145/94 NS), 1997. District Court, Civil Division in Kielce Technical opinion and determination of the cost of repairs and modernization Sanato Sanatorium in Busko Zdroj, 1997, the Regional Court, Civil Division in Kielce Opinion on NS 1482/94 Anna Markiewicz-			Various; technical opinions usually with valuation of work The orders made personally, comprehensively, at the request of the court.	Between 1992 and 1997, the cumulative net →	8	Expert witness for construction and real estate valuation.

	<p>Chain:Jerzy Chain. Expenditures on the plot in Tumilin, 1996. Local Court, Civil Division I in Kielce</p> <p>Technical opinion and valuation of the apartment being the subject of inheritance, Źródłowa 20 in Kielce, 1996. Local Court, Civil Division in Kielce</p> <p>Technical opinion and valuation of real estate S. Iwanowski, J. Pietrzyk, 1996. Regional Court, Criminal Division in Kielce,</p> <p>Technical opinion and value estimation of the shop GS Samopomoc Chłopska - Zbelutka Stara, 1996. Regional Court in Kielce, Civil Division</p> <p>Technical opinion about the cost of the renovation of shopping pavilion 35, Plac Targowy, 1996. Local Court, Civil Division in Kielce</p> <p>Technical opinion on VGC 37/95. Evaluation of technical and renovation costs of the building NOT, ul. Sienkiewicza in Kielce, 1996, the Local Court in Kielce, Commercial Court</p>			Designer entitled to control the technical conditions of buildings and other structures.
2	<p>Selected technical opinions on building facilities</p> <p>Evaluation of technical condition of prestressed girders in Zakłady Wyrobów Kamionkowych MARYWIL in Suchedniów – 1998.</p> <p>Evaluation of technical condition of production buildings in Zakłady Wyrobów</p>	<p>The girders span from 24 to 36 meters, at several halls</p> <p>Prefabricated halls with reinforced concrete structure.</p>	<p>Typical prestressed girders.</p> <p>Assessment of technical conditions, formulation of conclusions and recommendations.</p> <p>Evaluation of technical conditions of support structure halls: foundations, columns, beams, floor slabs, flat roof usable area of</p>	<p>Between 1992 and 12</p> <p>2011, the cumulative net →</p>

	Kamionkowych MARYWIL in Suchedniów – 1998.	approx.12000m ² , cubic capacity approx. 80000m ³	and cover panels.			
3	Factory detergents permanent CUSSONS POLSKA, Wrocław Investor: CUSSONS POLSKA	Cubic capacity of 16.000m ³ , 6 storey building area of 400m ² , usable area of approx. 2,000 m ² .	Industrial tower with dimensions in plan 20x20m and height of 40m. The tower made of steel. The foundation slab of reinforced concrete. Casing with lightweight panels (a core of polyurethane foam). Ceilings of reinforced concrete slab on steel girders. Reinforced concrete stairs	from November 1996 to December 1997	14	Main designer of construction: coordination of work; concept, calculations of static and strength; development of the conceptual drawings; supervision on site.
4	Tubular mill type 4139, with the system of power supply to the mine Giuchowiec Investor: Państwowe Kopalnie Surowców Drogowych in Kielce	Building area approx. 600 m ² , cubic capacity of approx. 3000m ³ . Foundation slab thickness 60 cm	The project foundations for mill Type 4139. Building a steel shelter and light casing	from December 1996 to July 1997	7	Main designer: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site.
5	Television Sets Factory in Żyrardów – Power building (The structural design of steel) Investor: Thompson TCE, Poland	Area ~ 12 000m ²	A two-nave steel structure 2x21m span, spacing of transverse frames every 7.5 m. Steel frame with variable geometry and rigid joints, pinned on the footings. Purlins continuous, roll, covering made of trapezoidal sheet.	from July 1997 to March 1998	8	Main designer: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site.
6	Hypermarket ALKAUF, Kraków-Kurdwanów Complex design of hall structure for	Area ~ 10 000m ²	Prefabricated. reinforced concrete frame construction. Column spacing 7,2x12m, height about 11m. The roof structure of steel lattice girders and	from December 1997 to June 1998	6	Main designer: interbranch coordination; concept, calculations of static and strength; development of

	Allkauf (steel construction with reinforced concrete elements, soil and foundation). Investor: Alkauf Poland	rolled purlins. Covering made of trapezoidal sheet. In the building was designed mezzanine of reinforced concrete.		the conceptual drawings, supervision on site.
7	Factory of Dry Dyckerhoff-SOPRO Nowiny Comprehensive structure project (steel, reinforced concrete elements, platforms technology, land, foundation slab, as well as elements of the general construction) Investor: Dyckerhoff-SOPRO	Area ~ 340m ² Height ~43m, Tower steel structure set on a reinforced concrete slab. Building dimensions about 17x20m. In the tower are designed 9 technology levels (storeys), including steel silos battery with a height of 16m. The whole was designed with rolled profiles, rigid joint high strength bolts. Casing made of sandwich panels and trapezoidal sheet. The project was also positively verified by an independent engineering office.	from December 1997 to July 1998 8	Main designer: interbranch coordination; calculations of static and strength; development of the conceptual drawings, supervision on site.
8	Factory of Dry Building Materials in Berlin TERRANOVA -Industrial tower Comprehensive structure project (steel, concrete, platforms technology, foundation slab, as well as elements of the general construction) Investor: Deutsche TERRANOVA Industry	Tower: Area ~ 324m ² Height ~18m Warehouse: Area ~ 1800m ² Tower steel structure set on a reinforced concrete slab. Building dimensions about 18x18m. In the tower are designed 5 technology levels (storeys), including steel silos battery with a height of 16m. The whole was designed with rolled profiles, rigid joint high strength bolts. Hall for storage of raw materials and finished products - frame construction, frame plate girder with variable geometry, rigid joints, pinned on the footings. Span of the	From December 1997 to December 1998 12	Main designer of construction: interbranch coordination; calculations of static and strength; development of the conceptual drawings, supervision on site.

		frame 18m spacing every 6m. Casing made of sandwich panels and trapezoidal sheet. The project was also positively verified by an independent engineering office.	Stage 1 - construction of reinforced concrete - storage boxes for clay, monolithic retaining wall with a height of 8m, the dimensions of box 12x8m. Roofing steel structure based on the walls. Stage 2 - warehouse and other halls, frame construction, prefabricated columns, overlap with roof grate. Span from 12 to 24m.	From December 1997 to June 1998	6	Main designer: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site.	
9	Expansion of Ceramic Factory CERSANIT S.A., Krasnystaw Stage 1 - clay magazine, area 600m ² , Stage 2 - High bay warehouse, picking, milling bumps, social building - total area ~ 3.500m ² Comprehensive structure project (steel, reinforced concrete, foundation, platforms technology, covering, general construction elements)	Total area ~ 4100m ² Investor: CERSANIT S.A.	Steel structure of building; steel columns anchored in concrete footings. In main part, spacing of columns 16,8x16,6m. Truss (height 1,2m) based on columns articulately. Truss purlins spaced every 4,5m, bracing systems. Aluminium and glass elevation.	From May 1998 to November 1998	6	Designer: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site.	
10	Car Showroom FIAT AUTO-POLAND Busko-Zdrój Comprehensive structure project (steel, reinforced concrete, foundation, technology platforms, covering, general construction elements) Investor: Auto-Polmozbyt	Area ~ 400m ² Height ~7m					11

12	Car Showroom OPEL Kielce Comprehensive structure project (steel, reinforced concrete, foundation, technology platforms, covering, general construction elements) Investor: Opel-Obrećki sp. z o.o.	Area ~ 1.200m ² Height ~6,8m Steel structure of building; steel columns anchored in concrete footings. Spacing of nave 21m, spacing of transverse systems - 6m. Truss (height 1,85m) based on columns articulately. Purlins of IPE, bracing systems.	From May 1998 to August 1998 3	Designer of construction: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site.	
13	Car Showroom AUDI/VW Lublin Comprehensive structure project (steel, reinforced concrete, foundation, technology platforms, covering, general construction elements) Investor: Danelczyk & Danelczyk	Area: -showroom ~ 2.300m ² -warehouse ~ 1.800m ² Height ~ 8m Steel structure of building; plate girder frame with rigid joints, anchored in concrete footings. Span length 36m, spacing of transverse systems - 10m. In warehouse framework system two-span (2x36m). Cold formed purlins Z, walls and roof systems. In showroom, steel structure with columns of closed profiles and spatial trusses. Aluminium and glass elevation.	From June 1998 to December 1998 6	Main designer: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site.	
	Warehouse for cement factory REJOWIEC Comprehensive structure project (steel, reinforced concrete, foundation, technology platforms, covering, general construction elements) Investor: Cementownia REJOWIEC	Area ~ 2.300m ² Height ~ 9m Steel structure of building; plate girder frame with rigid joints, anchored in concrete footings. Span length 24m, spacing of transverse systems - 12m. Cold formed purlins Z, walls and roof systems of brace. Casing made of sandwich panels and trapezoidal sheet. The roof covered by trapezoidal sheet.	From October 1998 to March 1999 5	Main designer: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site.	

<p>14</p> <p>Hypermarket HIT/OBI Bytom/Chorzów</p> <p>Comprehensive structure project (steel, reinforced concrete, foundation, flooring)</p> <p>Investor: HIT Polska</p> <p>Area ~ 20 000m²</p> <p>The main hall - construction of double-span frame built from plate girder span. Naves 37,5m, spaced every 7,5 m. The roof covering by trapezoidal layout with bracing (pipe and rod). Frame with a variable geometry, rigid joints and founded on footings.</p> <p>Hall OBI - construction of double-span frame built from plate girder span. Naves 22,5m and 30m, spaced at 7,5 m. Frame with a variable geometry, rigid joints founded on footings.</p>	<p>From October 1998 to December 1999</p> <p>Main designer: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site.</p>	<p>14</p> <p>Main designer: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site.</p>
<p>15</p> <p>Shopping Center GEANT CASINO – Warsaw, Ursynów</p> <p>Comprehensive structure project (reinforced concrete, foundation, soil)</p> <p>Investor: OTRA Poland</p> <p>Area ~ 10 000m² Height ~ 14,85m</p>	<p>1998-1999</p> <p>3-storey building - monolithic reinforced concrete, partly as a column and slab structure, partly with substrings of reinforced concrete. Max. spacing between columns – 10,2m.</p>	<p>6</p> <p>Main designer: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site.</p>
<p>16</p> <p>Housing estate SOSNOWE Tychy</p> <p>Comprehensive building projects and execution construction design of six residential buildings.</p> <p>Investor: ADAM-POL sp. z o.o.</p> <p>Total area: 8 000m²</p>	<p>Apartment buildings, 4-6 storey, monolithic reinforced concrete structure of the building; column and slab structure. Direct foundation on the footings, maximum distance between columns – 7,2m.</p>	<p>8</p> <p>From March 1999 to November 1999</p> <p>Designer: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site.</p>

17	Coolant Factory PETROFER - Nowiny Investor: PETROFER POLSKA	Total area: 2 000m ² Height: 6m	Steel construction of hall, Main span girders – 15m. Roof truss girders, spaced every 6m, steel columns anchored in the footings.	From May 1999 to March 2000	8	Designer of construction: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site.
18	Rebar hall with social-office Dymny Comprehensive structure project (reinforced concrete, foundation, soil) Investor: MITEX S.A.	Area: ~ 3.000m ² Height: 10,5m	Double nave hall, spar 18m, spacing of columns 12m. Prefabricated columns anchored in spread footing; steel structure of roof (trusses). In hall designed crane girders for 5Mg trolleys.	From July 1999 to December 1999	5	Main designer of construction: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site.
19	Shopping Center Nomi/Ahold Radom Investor: ECHO-INVESTMENT S.A.	Area: ~ 20 000m ² Height: 9,5m	Hypermarket – Frame construction building; column gird – 12x24m and 18x24m. Columns restrained in footings, structural system of roof pinned on columns. In hall was designed mezzanines (offices, technical rooms) – slab-column reinforcement concrete structure.	From August 1999 to April 2000	8	Main designer: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site.
20	Shopping Center Nomi/Ahold Tarnów Investor: ECHO-INVESTMENT S.A.	Area: ~ 20 000m ² Height: 9,5m	Hypermarket - Frame construction building; column gird 12x24m and 18x24m, columns restrained in footings, structural system of roof pinned on columns. In hall was designed mezzanines (offices, technical rooms) – slab-column	From October 1999 to May 2000	7	Main designer: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site.

		reinforcement concrete structure.		
	<p>Shopping Center Nomi/Ahola Siemianowice</p> <p>Investor: ECHO-INVESTMENT S.A.</p> <p>21</p>	<p>Area: ~ 7.000 m² Height: 9,5m</p> <p>Hypermarket: Frame construction building; column gird 12x24m and columns restrained in footings, structural system of roof pinned on columns. In hall was designed mezzanines (offices, technical rooms) – slab-column reinforcement concrete structure.</p> <p>Protection of main water supply in immediate vicinity of the wall of the designed building. Protect an 6m deep trench.</p>	From October 1999 to May 2000 7	Main designer: interbranch coordination; calculations of static and strength; development of the conceptual drawings, supervision on site.
	<p>PLIVA Kraków</p> <p>Investor: PLIVA</p> <p>22</p>	Capacity: 600m ³ <p>Container: Cylindrical storage tank, diameter 11m, height 6,85m. Roof designer as truss. Design cylindrical storage tank, piping and metering.</p>	From March 2000 to May 2000 2	Main designer of construction: interbranch coordination; calculations of static and strength; development of the conceptual drawings, supervision on site.
	<p>Shopping Center Nomi/Ahola Bielchatów</p> <p>Investor: ECHO-INVESTMENT S.A.</p> <p>23</p>	<p>Area: ~ 7.000 m² Height: 9,5m</p> <p>Supermarket: Frame construction building; column gird 12x24m, columns restrained in footings, structural system of roof pinned on columns. In hall was designed mezzanines (offices, technical rooms) – slab-column reinforcement concrete structure.</p>	From December 1999 to April 2000 5	Main designer: interbranch coordination; calculations of static and strength; development of the conceptual drawings, supervision on site.

24	Shopping Center Nomi/Ahond Piotrków Trybunalski Investor: <i>ECHO-INVESTMENT S.A.</i>	Area: ~ 18.000 m ² Height: 9,5m	Hypermarket: Frame construction building; column gird 12x24m, columns restrained in footings, structural system of roof pinned on columns. In hall was designed mezzanines (offices, technical rooms) – slab-column reinforcement concrete structure.	From November 1999 to May 2000 6	Main designer: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site.
25	Limestone-processing Factory Rykoszyn Investor: <i>PARTEK NORDKALK POLSKA</i>	Area: ~ 3ha	Tower, office-social place and external infrastructure. Limestone grinding plant tower – dimension: 9x16m, height: 32m, 5 technology floors, steel frame structure with rigid joints. Footing on concrete slab. Near grinding plant are located 3 silos with capacity 500m ³ . Steel substructures mounted on slab. Designed: place of storage, loading station, 3 flyover (500m) with the roller rail and electrostatic precipitator. Social and technical buildings designed in traditional technology. Two tanks (reinforced concrete) capacity 960m ³ .	From March 2000 to October 2000 7	Main designer: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site.
26	Shopping Center Nomi/Ahond Jelenia Góra	Area: ~ 19.000 m ² Height: 9,5m	Frame construction building; column gird 12x24m and 18x24m, columns	1999 6	Main designer: interbranch coordination; concept,

	Investor: ECHO-INVESTMENT S.A.	restrained in footings, structural system of roof pinned on columns. In hall was designed mezzanines (offices, technical rooms) – slab-column reinforcement concrete structure.	calculations of static and strength; development of the conceptual drawings, supervision on site.
27	Shopping Center RCMB RZESZÓW Rzeszów Investor: RCMB Rzeszów	Area: ~ 10.000 m ² Height: 11,5m Hall: sale of building materials. Hall in frame structure, two-span system (26,5x12m), columns restrained in footings, structural system of roof pinned on columns. In hall was designed mezzanines (offices, technical rooms) – slab-column reinforcement concrete structure.	From October 1999 to March 2000 Main designer: interbranch coordination; calculations of static and strength; development of the conceptual drawings, supervision on site.
28	Shopping Center OBI Lublin Investor: OBI POLSKA	Area: ~ 7000 m ² Hall: sale of building materials. Hall OBI - Double span plate girder frame (22,5;30mx7,5m). Non-purlin roof, trapezoidal sheet with bracings. Frame with a variable geometry with rigid joints. Hall founded on footings.	From May 2000 to December 2000 Main designer of construction: interbranch coordination; calculations of static and strength; development of the conceptual drawings, supervision on site.
29	Hypermarket OBI Kraków Investor: OBI POLSKA	Area: ~ 7 000m ² , Footbridge over the highway (A4) 2x38m=76m Hall: sale of building materials. Hall OBI - Double span plate girder frame (22,5;30mx7,5m). Non-purlin roof, trapezoidal sheet with bracings. Frame with a variable geometry with rigid joints. Hall founded on footings.	From April 2000 to October 2000 Main designer of construction: interbranch coordination; calculations of static and strength; development of the conceptual drawings,

30	Shopping Center OBI Kielce Investor: OBI POLSKA	Area: ~ 7 000m ² , Frame construction building; column gird 12x22,5m, reinforced columns restrained in footings, structural system of roof pinned on columns. In hall was designed mezzanines (offices, technical rooms) – slab-column reinforcement concrete structure. Exhibition part - Garden, steel structure, glass overlap and cover.	Footbridge over the highway – length 76m. plate girder construction, double span, box-like structure.	From May 2000 to November 2000	6	Main designer of construction: interbranch coordination; calculations of static and strength; development of the conceptual drawings, supervision on site.
31	Manufacture Tower KREISEL Będzin Investor: KREISEL POLSKA	Tower: area: ~ 230m ² height: 30m, Warehouse: area: ~ 1950m ²	Steel tower placed on reinforced slab . Building dimension: 15x15m, six technological floors. Casing made as sandwich panels and trapezoidal sheet. Steel warehouse, one nave with 29,55mx10,7m span. Steel columns and truss girders, continuous rolled purlins.	From June 2000 to June 2001	12	Main designer of construction: interbranch coordination; calculations of static and strength; development of the conceptual drawings, supervision on site.
32	Limestone-processing Factory Wolica	Total area: ~ 3 ha Dimension: 9x16m Height: 32m	Industrial tower with social-office part and external infrastructure. Steel, frame structure with rigid	From June 2000 to April 2001	8	Main designer: interbranch coordination; concept, calculations of static and

	Investor: POLSKA	PARTEK	NORDKALK	5 technological floors	joints, founded on slab. Near grinding plant are located 3 silos with capacity 500m ³ . Steel substructures mounted on slab. Designed: place of storage, loading station, 3 flyover (500m) with the roller rail and electrostatic precipitator. Social and technical buildings designed in traditional technology. Two tanks (reinforced concrete) capacity 960m ³ .	strength; development of the conceptual drawings, supervision on site.
	Ceramic Tiles Factory CERSANIT III Factory 1 in Wałbrzych			Total area: ~ 40 000m ²	Frame construction building; column gird 12x24m, reinforced columns restrained in footings, truss structural system of roof pinned on columns. In hall was designed mezzanines (offices, technical rooms) – slab-column reinforcement concrete structure. Design of foundations and supporting structures for machines including furnaces.	From April 2000 to 13 July 2001 Main designer: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site.
34	Shopping Center Nomi/Ahond Zamość		S.A.	CERSANIT Wałbrzych 33	Supermarket: Frame construction building, column gird 12x24m, prefabricated, reinforced columns restrained in footings, structural system of roof pinned on columns. In	From August 2000 to July 2001 Main designer: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings,

		hall was designed (offices, technical rooms) – slab-column reinforcement concrete structure.	mezzanines – slab-concrete structure.	supervision on site.
35	Shopping Center Nomi/champion Płock Investor: ECHO-INVESTMENT S.A.	Area: ~ 12 000m ² Height: 9,5m	Hypermarket: Frame construction building; column gird 12x24m and 18x24m, prefabricated, reinforced columns restrained in footings, structural system of roof pinned on columns. In hall was designed mezzanines (offices, technical rooms) – slab-column reinforcement concrete structure.	From April 2001 to March 2002 Main designer: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site.
36	Shopping Center Nomi Pila Investor: ECHO-INVESTMENT S.A.	Area: ~ 3500m ² Height: 9,5m	Supermarket: Frame construction building; column gird 12x24m, prefabricated, reinforced columns restrained in footings, structural system of roof pinned on columns. In hall was designed mezzanines (offices, technical rooms) – slab-column reinforcement concrete structure.	From April 2001 to September 2001 Main designer: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site.
37	Buildings TOWERS Warszawa Investor: BARANOWITZ POLSKA	PARK total useful floor area ~ 20 000m ² Height: 46m	Two 13-floors buildings Frame construction building with two lift shafts, column gird 5,4x6,3m, monolithic, reinforced columns restrained in slab. Two underground	2001 Main designer of construction: interbranch coordination; concept, calculations of static and strength; development of

	S.A.	floors with walls.	protection diaphragm			the conceptual drawings, supervision on site.
	Tobacco-Caporal Factory in Radom Expertise of ceilings Investor: Altadis Polska 38	Area: ~ 1200m ²	Existing plate-fin ceiling required an expertise of the technical conditions to identify its actual deadweight. As part of the expertise was studied the strength of concrete with sclerometric method and the distribution of reinforcement using ferrometer. Part of the roof was designed to be strengthened by additional steel profiles combined with the existing reinforced concrete structure.	From May 2001 to July 2001	2	Main designer: inventory; interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site.
	Precision Horing Piotrków Trybunalski 39 General Designer: Ways&Freiteg sp. z o.o. Investor: ATORU sp. z o.o.	Area: ~ 650m ²	Steel building structure with reinforced concrete columns and foundations.	From September 2001 to July 2002	10	Main designer of construction: concept, calculations of static and strength; development of the conceptual drawings, supervision on site.
40	Shopping Centre Ahold Olkusz Investor: ECHO-INVESTMENT S.A.	Area: ~ 8000m ² Height: 9,5m	Supermarket: Frame construction building; column gird 12x24m, prefabricated, reinforced restrained in footings, structural system of roof pinned on columns. In	From August 2002 to April 2003	8	Main designer of construction: interbranch coordination; concept, calculations of static and strength; development of

		hall was designed (offices, technical rooms) – slab-column reinforcement concrete structure.	mezzanines – slab-concrete structure.	the conceptual drawings, supervision on site.
	Ceramic Tiles Factory CERSANIT III S.A. Factory no 2 Wałbrzych Investor: Wałbrzych 41	Area: ~ 14 000m ² Height: 8-14m CERSANIT III S.A.	Frame construction building; column gird 12x24m, prefabricated, reinforced columns restrained in footings, structural system of roof pinned on columns. In hall was designed mezzanines (offices, technical rooms) – slab-column reinforcement concrete structure. In higher part – steel two – branch columns. Design of foundations and supporting structures for machines including furnaces	From August 2002 to June 2003 Designer: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site
	Acryl and Shower Cabins Factory CERSANIT II S.A. Starachowice Investor: Starachowice 42	Area: ~ 7.000m ² Height: 8-12m CERSANIT II	Frame construction building; column gird 12x24m, prefabricated, reinforced columns restrained in footings, structural system of roof pinned on columns. In hall was designed mezzanines (offices, technical rooms) – slab-column reinforcement concrete structure. In higher part – steel two – branch columns. Design of foundations and supporting structures for machines and steel	From August 2001 to April 2002 Main designer: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site

		chimney (42m) including furnaces.		
43	Hotel IBIS Warszawa Architecture: Subcontractor : Eiffage	Total useful floor area: ~ 14.000m ² Reinforced concrete building. Hotel. Frame construction building, 7 floors.	From September 2002 to November 2003	13 Designer-consultant: concept, calculations of static and strength; development of the conceptual drawings calculation of static and strength; develop the concept of drawing.
44	Hall of logistics service Wólk Kosowska Investor: GD Poland Distribution Centre	Area: ~ 9.000m ² Trading halls: Steel hall (columns and truss) non-purlin, with industrial floor reinforced fibres.	From September 2003 to April 2004	6 Main designer of construction: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site
45	Ceramic Tiles Factory CERSANIT III S.A. Factory nr 3 Wałbrzych Investor: CERSANIT III S.A. Wałbrzych	Area: ~ 28.000m ² Production facility: Frame construction building; column gird 12x24m, reinforced restrained in footings, structural system of roof pinned on columns. In hall was designed mezzanines (offices, technical rooms) – slab-column reinforcement concrete structure. Design of foundations and supporting structures for machines including furnaces.	Frame 2003 10	Designer-consultant: calculations of static and strength; development of the conceptual drawings, supervision on site

	Wet Mortars Factory KREISEL Ujazd	Tower: area: ~ 230m ² height: ~ 30m Warehouse: area: ~ 1950m ²	Hall with social-office part and industrial tower. Steel hall founded on reinforced concrete slab. Dimensions: 15mx15m, 6 technological floors, 4 silos (diameter 2,9m). Casing of sandwich panels and trapezoidal sheet.	From May 2003 to April 2004	11	Main designer of construction: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site.
46	Investor: KREISEL POLSKA	Warehouse (29,55mx10,7m) Steel columns, roof girder (truss), continuous rolled purlins.				
47	Modernisation of Furnace No 2 – POLCOLOR Piaseczno	Total area: ~ 2 000m ²	Modernization of the hall, multi-floor with external infrastructure. Construction of four silos with a diameter of 5,8m each and 12 m height.	From May 2003 to December 2003	7	Designer-consultant: concept; calculations of static and strength; development of the conceptual drawings, supervision on site
48	Investor : CHOVET ENGINEERING	Total area: ~ 15 000m ² ,	Hall: Steel frame structure with a floor industrial reinforced fibre.	From July 2003 to May 2004	10	Main designer of construction: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site
49	Business Centre Łazy					
	Investor: Black & Weach					
	Sports and Entertainment Arena Szczecin	Total area: ~ 21 000 m ²	Sports hall for 5400 spectators; with office-service. Roof covering – 3D structure, spar 105m.	From June 2004 to May 2005	11	Main designer of construction: interbranch coordination; concept,

	Investor: Urząd Miasta Szczecin	Reinforced foundation.	grandstands and	calculations of static and strength; development of the conceptual drawings, supervision on site
50	PSE Headquarters Konstancin Bielawa	Total area: ~ 23 200 m ² Dome diameter: 14m Reinforced concrete building, underground (23 200m ²) 3 floors above ground and 2 floors underground. The main building with internal steel platforms and ribbed dome.	Office and conference building. Reinforced concrete building, infrastructure	From December 2004 to April 2006 Main construction: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site; construction ellipsoidal dome; overhang of the building reinforced concrete.
51	Bathroom Furniture Factory CERSANIT II S.A. Starachowice	Total area: ~ 7.000m ² Steel, truss roof; column gird 12x24m, included technology design.	Production facility.	From July 2004 to March 2005 Designer of construction - consultant: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site construction ellipsoidal dome; overhang of the building reinforced concrete.
52	The shopping and entertainment centre „Złote Tarasy” - cinemas	Weight of construction: 2000 t	Steel structure of cinemas. System of plate girders and columns with	From July 2004 to December 2004 Main construction: interbranch

	Warszawa Investor: Złote Tarasy sp. z o.o.	complicated shapes - performed in a computer software PROSTEEL	concept, coordination; calculations of static and strength; development of the conceptual drawings, supervision on site
53	The shopping and entertainment centre „Manufaktura” Łódź Investor: APSYS	Weight of construction: ~ 1600 t Total area: ~ 97.0000m ²	The design of reinforced concrete and steel with complex functions, schemas and processes
54	Budynki mieszkalne Viterra w Warszawie przy ul. Leszczyńskiej Architektura: Grupa 5 Inwestor: VITERRA	Total area: 13000m ²	<p>Budynki mieszkalne o łącznej powierzchni ok. 7.500m². Budynek mieszkalny z garażem podziemnym o wysokości 24m zaprojektowano w konstrukcji żelbetowej. Budynek posadowiono na płycie fundamentowej grubości 80cm. Na obwodzie całej części poodziemnej zaprojektowano ściany szczelinowe gr. 60cm, na głębokość 14,5m poniżej poziomu 0 budynku. Stropy wszystkich poziomów o gr. 25cm w części podziemnej i 21cm w części nadziemnej. Stupy o przekroju zmiennym 25-60x 25-80. Ściany zaprojektowano jako wypełnienie szkieletu stupowato płyтовego z pustaków ceramicznych Porotherm gr. 25cm.</p> <p>From August 2004 to November 2005</p> <p>From August 2004 14 to November 2005</p> <p>From March 2006 7 to September 2006</p>

55	Shipping- Distributive Centre of the Poczta Polska Zabrze Investor: Poczta Polska	Area: ~ 26.000 m ² , Technological Hall: frame, steel-reinforced concrete structure, with lightweight casing panels and industrial floors. Over a dozen unloading docks	From June 2004 to May 2005 12	Main designer of construction: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site
56	The municipal football stadium. Steel roof Kielce Investor: City Kielce	The overlap steel stands municipal football stadium for 40 000 spectators Every second girder based on column. The other girder based on the substring. Solved the problem of uneven movement adjacent girders.	From March 2005 to October 2005 7	Main designer of construction: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings, supervision on site
57	The Team of Residential Buildings in Warsaw, ul. Górczewska Architecture: APA Kuryłowicz Investor: JW Construction	Area: 80 000m ² 4 areas of multi-family buildings (A, B, C, D), each approx. 20 000m ² . A total of 1,382 apartments (from 1 to 5 bedroom). Buildings in reinforced concrete slab and girder of underground garage part (2 floors), which may be the storerooms. Due to the high level of ground water used diaphragm walls, bentonite mats under the slab floors and tight connection slab of diaphragm walls.	From April 2004 to October 2006 31	Main designer of construction; calculations of static and strength; development of the conceptual drawings, supervision on site
58	Shipping - Distributive Centre of the Poczta Polska - in Lublin	Area: ~ 26 000m ² Each Shipping- Distributive Centre of the Poczta Polska was composed of several cubic objects. The most	From August 2009 to September 2010 16	Main designer of construction -consultant - coordinator: concept of

	<ul style="list-style-type: none"> - in Rzeszów - in Chełciny - in Olsztyn <p>Investor: Poczta Polska</p>	<p>important and largest was technological building (BTG). The main supporting structure is plate girder framework with rigid joints and restrained in the foundations. 4 naves with span of 24m x12m. Truss purlins based on frameworks. The stability of the system is ensured by bracing system. Due to the large size of the object is provided dilatation along and transverse structure. Due to the need for secret offices project object was carried out in consortium Qumak-Secom SA, which has the appropriate certificates.</p>	superstructures; conceptual calculation of static and strength; develop the concept of drawing; interbranch coordination.	
59	Central Warehouse JYSK Radomsko Stage I	Total area: ~ 40 000m ²	Warehouse of finished Products JYSK in POLAND with social office building. Reinforced concrete structure – prefabricated, with steel purlins.	From May 2006 to April 2007 11 Designer of construction - consultant: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings,
60	Central Storage of Final Products CERSANIT III S.A. Wałbrzych	Storage area for finished products: total area: ~ 20.000m ² Warehouse: total area: ~ 12.000 m ²	Storage yard with driveway, retaining wall and loading boards.	From June 2005 to November 2005 4 Designer of construction - consultant: interbranch coordination; concept, calculations of static and strength; development of the conceptual drawings,
61	Ceramic Tiles Factory CERAMIKA MARCONI	Total area: ~ 36.000 m ² height: ~ 8-14m	Frame structure building, column gird 12x24m, reinforced concrete	From June 2006 to May 2007 12 Designer of construction - consultant: interbranch

	Piechowice Investor: z.o.o. Piechowice,	Ceramika MARCONI sp.	Total area: ~ 60 000 m ² Ukraine, Novograd Volynski	<p>pillars restrained in footings. On the pillars pinned truss structure of roof. In higher part, steel structure with multi-drop pillars. In hall was designed mezzanines (offices, technical rooms) – slab-column reinforcement concrete structure.</p>	<p>From October 2005 to April 2008</p> <p>Two factory with social-office places, supporting facilities and external infrastructure.</p> <p>Steel, frame structure. Steel covering, reinforced concrete pillars. Halls with different height. Industrial floors reinforced with steel inserts. Social-office part integrated with production halls.</p> <p>The biggest problem was to strengthen ground (loess) for the foundation slab – using geogrids mattresses filled aggregate and CFA piles.</p>	<p>Main designer of construction -consultant – coordinator: concept of superstructures; conceptual calculation of static and strength; develop the concept of interbranch coordination; supervision on site in Ukraine</p>
62	Ceramic Tiles and Sanitary Factory Cersanit	Ceramics				
63	Shopping and Entertainment Centre Echo-Investment in Łomża	Centre	Total area: ~ 40 000 m ²	<p>Shopping Centre. Building with steel overlap on reinforced concrete pillars (16x16m or 16mx24m). Columns parking rectangular selected from the condition of optimal use of parking spaces. The building provides staircases reinforced concrete and</p>	<p>From December 2005 to July 2006</p>	<p>Main designer of construction -consultant – coordinator: concept of superstructures; conceptual calculation of static and strength; develop the concept of</p>

		reinforced concrete mezzanines. The project also included retaining walls and tank fire place under the surface of the square maneuvering.		drawing; coordination interbranch
64	Extension of Shopping Centre ECHO in Kielce, ul. Świętokrzyska Investor: Echo-Investment Kielce	Total area: ~ 6 800 m ² The main supporting structure of hall – plate girders of variable height with rigid joints, spaced at 8m. The most important and difficult part of the object were made soil and water conditions, the result of which has used structures box - reinforced concrete and foundation for long piles foundation.	From December 2005 to August 2006	Main designer of construction -consultant – coordinator: concept of superstructures; conceptual calculation of static and strength; develop the concept of drawing; coordination interbranch
Total more than 450 months [=simultaneous 40 years] for a period of 19 years' experience in designing and developing construction technical opinions including 14 years in Biuro Projektów Budownictwa Chodor-Projekt sp.z o.o. in Kielce				

Design services under the guidance of PhD., Eng., Arch. Leszek Chodor in years 2008 to 2017

Large area and industrial objects

No.	Subject	Customer	Value of the documentation	Years	Notes, in company
1	Comprehensive design services in all branches and all stages – Shopping Centre THE OUTLET CENTRE in Sosnowiec (FHW)	Liebrecht & wood Poland	210 000 EUR	2008	BPB Chodor-Projekt , sp. z o.o.
2	Main designer of assembly hall in the area of existing factory SEFAKO in Sędziszów	The Boiler Factory SEFAKO S.A.	205 000 EUR	2008	BPB Chodor-Projekt , sp. z o.o.
3	Main designer: Sanitary Ceramics and Ceramic Tiles Factory NOVOGRAD VOLYNSKIJ Ukraine	CERSANIT INVEST Sp. z o.o. Ukraine	473 000 EUR	2009	BPB Chodor-Projekt sp. z o.o.
4	Warehouse with infrastructure and carport passage between existing halls	ROTO-Frank Lubartów	55 000 EUR	2011-2012	Polskie Inwestycje sp. j. Grażyna i Leszek Chodor
5	Building inventory and technical documentation of hall T5 Saint Gobain Abbrasives in Koło. Expertise of the technical roof and industrial floor conditions.	Saint-Gobain Abbrasives Koło	30 000 EUR	2011-2012	Polskie Inwestycje sp. j. Grażyna i Leszek Chodor
6	Logistic Centre Jeronimo Martins Poland (Biedronka) Lubartów Buildings: production and storage hall, area ~10 hectares social-office building car wash fire protection tank roads, squares	Jeronimo Martins Poland, Lubartów	210 000 EUR	2012-2013	Polskie Inwestycje sp. j. Grażyna i Leszek Chodor
7	Shopping Centre Carrefour Bydgoszcz. Conversion on Outlet Branch: construction	Carrefour Warszawa	8 000 EUR	2017	Chodor-Projekt sp. z o.o.

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