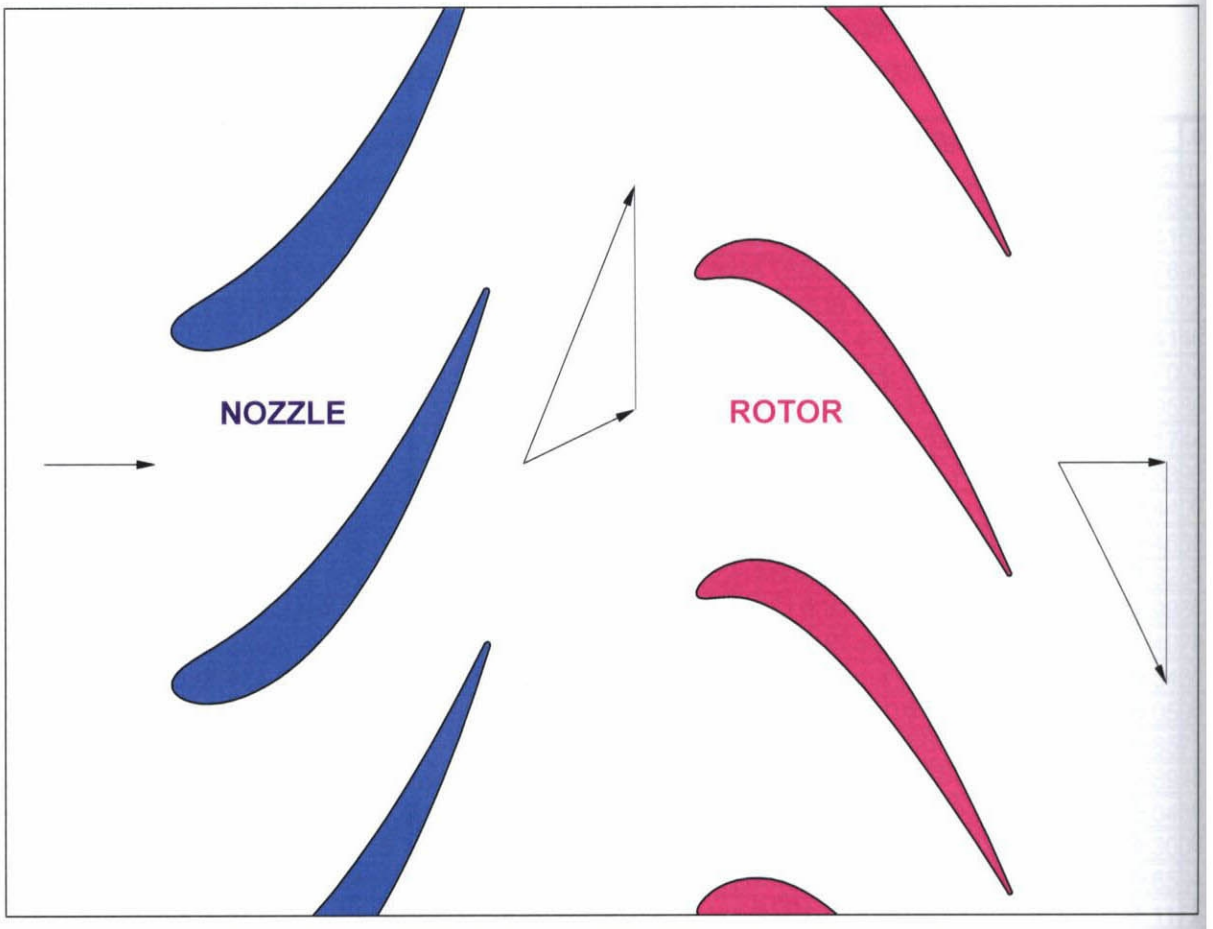


付図 1.11　タービン静翼・動翼の配置（原寸）と設計点における速度三角形
（測定位置 $N_R=10$，半径 $R=209$mm，スパン方向位置 $y/H=0.453$）

付表 1.31　　タービン静翼・動翼の仕様（測定位置 $N_R=10$，半径 $R=209$mm）

		Nozzle	Rotor
Chord	C	67.38 mm	57.53 mm
Axial Chord	C_{ax}	42.50 mm	41.80 mm
Blade Pitch	S	46.90 mm	42.36 mm
Solidity	C/S	1.437	1.358
Inlet Blade Angle	α_1	0.00 deg	25.57 deg
Exit Blade Angle	α_2	67.76 deg	63.05 deg
Blade Turning Angle	$\alpha_2 - \alpha_1$	67.76 deg	88.63 deg
Stagger Angle	ξ	51.15 deg	43.75 deg
Trailing Edge Diameter	d_{TE}	0.6 mm	0.6 mm
Flow Coefficient	Φ	0.508	
Blade Loading Coefficient	ψ	1.243	
Reaction	Λ	0.378	
Nozzle / Rotor Axial Spacing	L_{NR}	27.45 mm	

付表 1.32　タービン静翼の座標（測定位置 $N_R=10$，半径 $R=209$mm）
ハブ側壁面からの距離 $y=34.0$mm，スパン方向位置 $y/H=0.453$

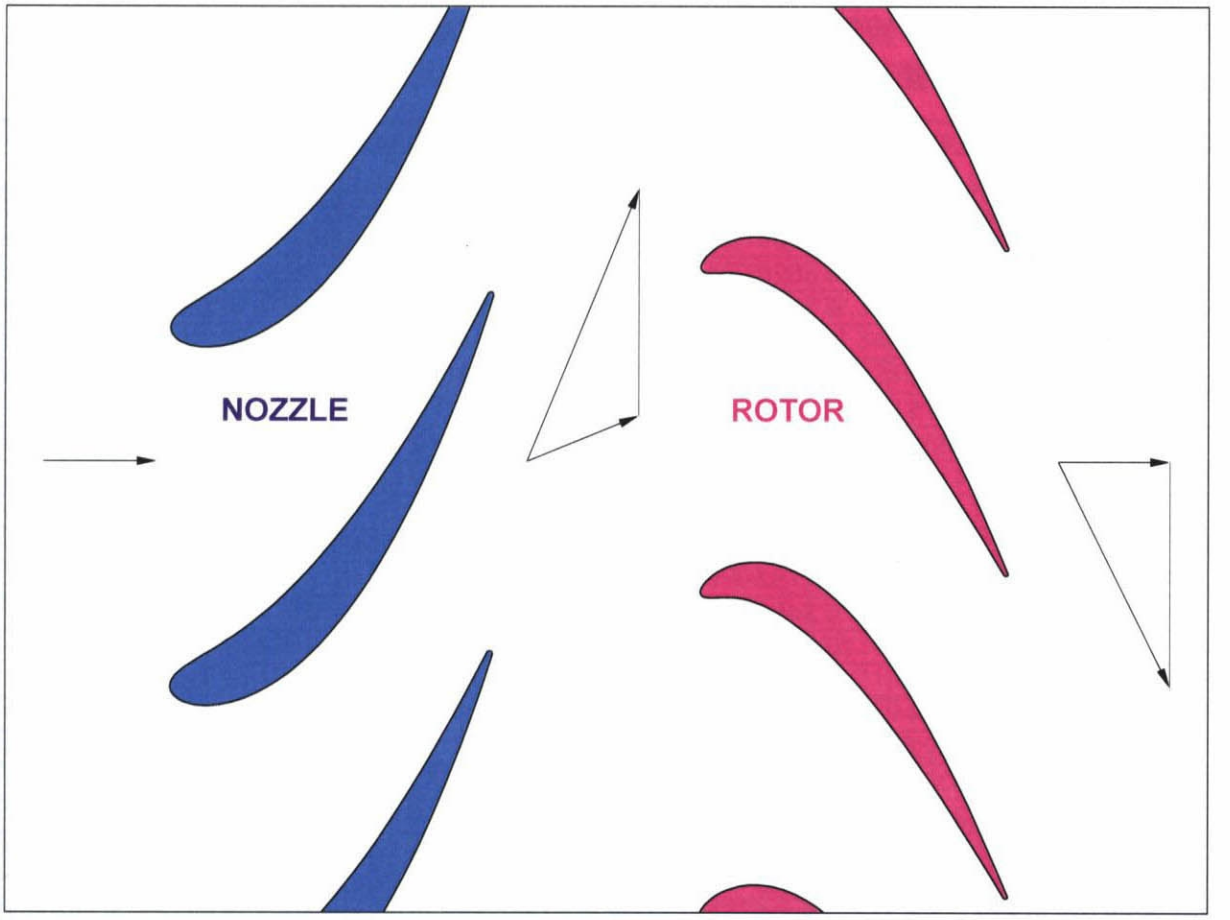
No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-0.0924	209.0000	4.1024	-0.0924	-0.0924	209.0000	4.1024	-0.0924
2	-0.5934	208.9992	4.1758	-0.5934	0.4084	208.9996	4.1805	0.4084
3	-0.9499	208.9978	4.3179	-0.9500	0.7621	208.9986	4.3415	0.7621
4	-1.2923	208.9960	4.5243	-1.2923	1.0951	208.9971	4.5898	1.0951
5	-1.6273	208.9937	4.7907	-1.6273	1.4080	208.9953	4.9295	1.4080
6	-1.9586	208.9908	5.1136	-1.9587	1.6962	208.9931	5.3643	1.6962
7	-2.2896	208.9875	5.4900	-2.2896	1.9526	208.9909	5.8972	1.9526
8	-2.6235	208.9835	5.9175	-2.6236	2.1681	208.9888	6.5305	2.1682
9	-2.9643	208.9790	6.3949	-2.9644	2.3322	208.9870	7.2656	2.3322
10	-3.3163	208.9737	6.9219	-3.3164	2.4327	208.9858	8.1027	2.4328
11	-3.7048	208.9672	7.5319	-3.7050	2.4554	208.9856	9.0927	2.4554
12	-4.2948	208.9559	8.4886	-4.2951	2.3120	208.9872	10.6625	2.3121
13	-4.8842	208.9429	9.4512	-4.8847	1.9777	208.9906	12.2270	1.9777
14	-5.4949	208.9278	10.4307	-5.4956	1.4745	208.9948	13.7750	1.4745
15	-6.1429	208.9097	11.4348	-6.1438	0.8189	208.9984	15.2989	0.8189
16	-6.8408	208.8880	12.4684	-6.8420	0.0238	209.0000	16.7936	0.0238
17	-7.5989	208.8618	13.5340	-7.6006	-0.8999	208.9981	18.2567	-0.8999
18	-8.4255	208.8301	14.6328	-8.4277	-1.9437	208.9910	19.6869	-1.9437
19	-9.3271	208.7918	15.7644	-9.3302	-3.1002	208.9770	21.0846	-3.1003
20	-10.3091	208.7456	16.9279	-10.3133	-4.3636	208.9544	22.4507	-4.3640
21	-11.3757	208.6902	18.1217	-11.3813	-5.7293	208.9215	23.7866	-5.7300
22	-12.5299	208.6241	19.3440	-12.5374	-7.1934	208.8762	25.0944	-7.1948
23	-13.7742	208.5456	20.5926	-13.7842	-8.7528	208.8166	26.3758	-8.7554
24	-15.1103	208.4531	21.8657	-15.1235	-10.4051	208.7408	27.6329	-10.4094
25	-16.5393	208.3446	23.1612	-16.5566	-12.1484	208.6466	28.8676	-12.1552
26	-18.0618	208.2181	24.4773	-18.0844	-13.9809	208.5319	30.0818	-13.9913
27	-19.6783	208.0715	25.8122	-19.7075	-15.9015	208.3942	31.2772	-15.9168
28	-21.3888	207.9027	27.1644	-21.4264	-17.9089	208.2313	32.4552	-17.9309
29	-23.1931	207.7091	28.5326	-23.2410	-20.0024	208.0406	33.6173	-20.0331
30	-25.0908	207.4884	29.9155	-25.1515	-22.1810	207.8196	34.7647	-22.2229
31	-27.0812	207.2380	31.3120	-27.1576	-24.4441	207.5656	35.8984	-24.5002
32	-29.1638	206.9552	32.7212	-29.2592	-26.7909	207.2758	37.0192	-26.8648
33	-31.3375	206.6373	34.1425	-31.4561	-29.2209	206.9472	38.1280	-29.3169
34	-33.6016	206.2812	35.5754	-33.7481	-31.7332	206.5769	39.2251	-31.8564
35	-35.9550	205.8840	37.0191	-36.1348	-34.3274	206.1617	40.3112	-34.4836
36	-38.3967	205.4427	38.4737	-38.6161	-37.0028	205.6983	41.3865	-37.1989
37	-40.9256	204.9539	39.9388	-41.1918	-39.7588	205.1834	42.4510	-40.0026
38	-43.5410	204.4142	41.4146	-43.8623	-42.5951	204.6134	43.5048	-42.8956
39	-46.2423	203.8201	42.9010	-46.6281	-45.5117	203.9845	44.5477	-45.8793
40	-49.0300	203.1676	44.3981	-49.4912	-48.5094	203.2925	45.5796	-48.9559
41	-51.9091	202.4511	45.9064	-52.4582	-51.5935	202.5317	46.5996	-52.1325
42	-51.9550	202.4393	46.0403	-52.5055	-51.7526	202.4912	46.5525	-52.2966
43	-52.0180	202.4231	46.1371	-52.5706	-51.8632	202.4629	46.5291	-52.4108
44	-52.0405	202.4173	46.2515	-52.5939	-51.9567	202.4389	46.4637	-52.5073
45	-52.0190	202.4229	46.3662	-52.5716	-52.0190	202.4229	46.3662	-52.5716

X_{3D}, Y_{3D}, Z　: Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D}, Z　: Two-dimensional coordinate system (axial and circumferential coordinates)

付表 1.33　タービン動翼の座標（測定位置 $N_R=10$，半径 $R=209$mm）
ハブ側壁面からの距離 $y=34.0$mm，スパン方向位置 $y/H=0.453$

No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-6.2816	208.9056	12.3769	-6.2825	-6.2816	208.9056	12.3769	-6.2825
2	-6.0465	208.9125	12.6023	-6.0474	-6.6196	208.8951	12.3001	-6.6207
3	-5.9419	208.9155	12.8537	-5.9427	-6.9262	208.8852	12.3458	-6.9275
4	-5.8889	208.9170	13.1679	-5.8897	-7.2724	208.8734	12.4776	-7.2738
5	-5.8780	208.9173	13.5436	-5.8788	-7.6560	208.8597	12.6966	-7.6577
6	-5.8999	208.9167	13.9783	-5.9007	-8.0711	208.8441	13.0054	-8.0731
7	-5.9444	208.9154	14.4687	-5.9452	-8.5091	208.8267	13.4074	-8.5115
8	-5.9997	208.9139	15.0114	-6.0005	-8.9591	208.8079	13.9063	-8.9619
9	-6.0531	208.9123	15.6022	-6.0540	-9.4085	208.7881	14.5063	-9.4116
10	-6.0913	208.9112	16.2364	-6.0921	-9.8421	208.7681	15.2122	-9.8457
11	-6.0998	208.9110	16.9453	-6.1006	-10.2622	208.7479	16.0755	-10.2664
12	-6.0291	208.9130	17.9995	-6.0299	-10.7428	208.7237	17.5046	-10.7476
13	-5.8600	208.9178	18.9889	-5.8608	-11.0050	208.7101	18.9994	-11.0101
14	-5.6034	208.9249	19.9331	-5.6041	-11.0493	208.7077	20.5398	-11.0545
15	-5.2686	208.9336	20.8569	-5.2692	-10.8781	208.7167	22.1010	-10.8830
16	-4.8585	208.9435	21.7856	-4.8590	-10.5001	208.7361	23.6574	-10.5046
17	-4.3688	208.9543	22.7405	-4.3692	-9.9310	208.7639	25.1878	-9.9347
18	-3.7914	208.9656	23.7352	-3.7916	-9.1899	208.7979	26.6785	-9.1929
19	-3.1179	208.9767	24.7753	-3.1180	-8.2965	208.8353	28.1239	-8.2987
20	-2.3420	208.9869	25.8608	-2.3420	-7.2676	208.8736	29.5241	-7.2691
21	-1.4607	208.9949	26.9885	-1.4607	-6.1170	208.9105	30.8823	-6.1179
22	-0.4736	208.9995	28.1536	-0.4736	-4.8556	208.9436	32.2032	-4.8560
23	0.6178	208.9991	29.3513	0.6178	-3.4918	208.9708	33.4915	-3.4920
24	1.8102	208.9922	30.5772	1.8103	-2.0329	208.9901	34.7519	-2.0329
25	3.0999	208.9770	31.8273	3.1000	-0.4847	208.9994	35.9883	-0.4847
26	4.4822	208.9519	33.0981	4.4825	1.1475	208.9968	37.2039	1.1475
27	5.9525	208.9152	34.3869	5.9533	2.8589	208.9804	38.4016	2.8590
28	7.5058	208.8652	35.6914	7.5074	4.6451	208.9484	39.5835	4.6455
29	9.1373	208.8002	37.0098	9.1402	6.5018	208.8988	40.7517	6.5028
30	10.8420	208.7186	38.3403	10.8469	8.4249	208.8301	41.9077	8.4272
31	12.6153	208.6189	39.6817	12.6230	10.4105	208.7406	43.0526	10.4148
32	14.4525	208.4997	41.0329	14.4640	12.4550	208.6286	44.1877	12.4623
33	16.3490	208.3596	42.3931	16.3657	14.5547	208.4926	45.3137	14.5665
34	18.3005	208.1972	43.7616	18.3240	16.7063	208.3312	46.4312	16.7241
35	20.3030	208.0115	45.1378	20.3351	18.9065	208.1431	47.5410	18.9324
36	22.3524	207.8013	46.5214	22.3952	21.1524	207.9269	48.6432	21.1887
37	24.4451	207.5655	47.9121	24.5012	23.4413	207.6813	49.7381	23.4907
38	26.5778	207.3032	49.3098	26.6499	25.7708	207.4051	50.8261	25.8366
39	28.7475	207.0135	50.7144	28.8389	28.1389	207.0971	51.9072	28.2246
40	30.9519	206.6954	52.1259	31.0661	30.5442	206.7560	52.9813	30.6540
41	33.1899	206.3478	53.5448	33.3310	32.9867	206.3804	54.0485	33.1252
42	33.3144	206.3278	53.6042	33.4571	33.0625	206.3683	54.0948	33.2020
43	33.3698	206.3188	53.7066	33.5133	33.1770	206.3499	54.0821	33.3180
44	33.3824	206.3168	53.8226	33.5260	33.2780	206.3336	54.0259	33.4202
45	33.3502	206.3220	53.9348	33.4933	33.3502	206.3220	53.9348	33.4933

X_{3D}, Y_{3D}, Z　: Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D}, Z　: Two-dimensional coordinate system (axial and circumferential coordinates)



付図 1.12　タービン静翼・動翼の配置（原寸）と設計点における速度三角形
（ミッドスパン, N_R=11, 半径 R=212.5mm, スパン方向位置 y/H=0.500）

付表 1.34　タービン静翼・動翼の仕様（ミッドスパン，N_R=11，半径 R=212.5mm）

		Nozzle	Rotor
Chord	C	67.52 mm	57.52 mm
Axial Chord	C_{ax}	42.73 mm	41.02 mm
Blade Pitch	S	47.69 mm	43.07 mm
Solidity	C/S	1.416	1.335
Inlet Blade Angle	α_1	0.00 deg	22.06 deg
Exit Blade Angle	α_2	67.43 deg	63.44 deg
Blade Turning Angle	$\alpha_2 - \alpha_1$	67.43 deg	85.50 deg
Stagger Angle	ξ	50.99 deg	44.82 deg
Trailing Edge Diameter	d_{TE}	0.6 mm	0.6 mm
Flow Coefficient	Φ	0.500	
Blade Loading Coefficient	ψ	1.203	
Reaction	Λ	0.399	
Nozzle / Rotor Axial Spacing	L_{NR}	27.77 mm	

付表 1.35　タービン静翼の座標(ミッドスパン, 測定位置 $N_R=11$, 半径 $R=212.5$mm)
ハブ側壁面からの距離 $y=37.5$mm, スパン方向位置 $y/H=0.500$

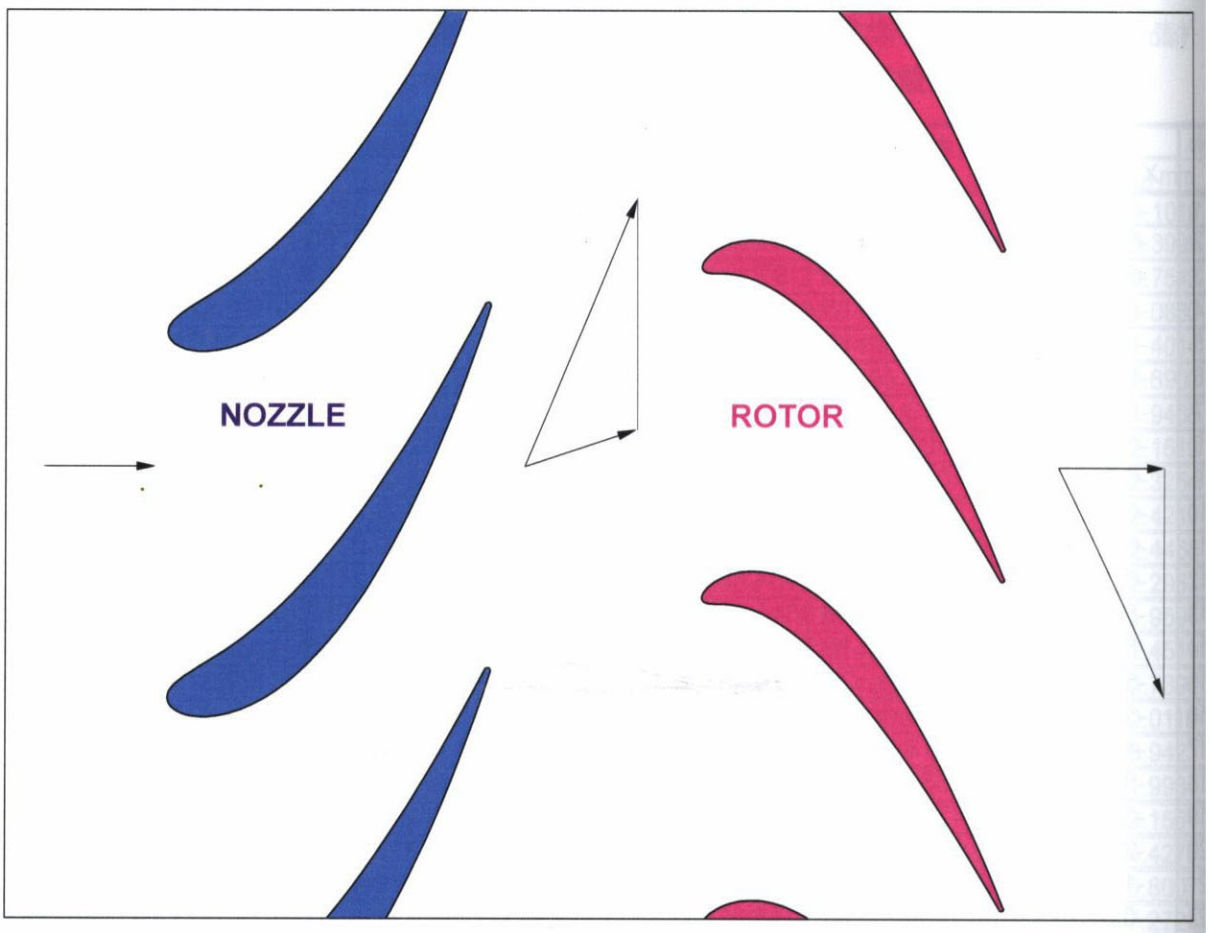
No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-0.1019	212.5000	3.8659	-0.1019	-0.1019	212.5000	3.8659	-0.1019
2	-0.6040	212.4991	3.9397	-0.6040	0.3999	212.4996	3.9444	0.3999
3	-0.9613	212.4978	4.0826	-0.9613	0.7543	212.4987	4.1063	0.7543
4	-1.3043	212.4960	4.2900	-1.3043	1.0880	212.4972	4.3560	1.0880
5	-1.6401	212.4937	4.5579	-1.6401	1.4014	212.4954	4.6977	1.4014
6	-1.9723	212.4908	4.8825	-1.9724	1.6900	212.4933	5.1351	1.6900
7	-2.3042	212.4875	5.2608	-2.3043	1.9465	212.4911	5.6711	1.9465
8	-2.6393	212.4836	5.6906	-2.6394	2.1619	212.4890	6.3080	2.1619
9	-2.9814	212.4791	6.1706	-2.9815	2.3254	212.4873	7.0473	2.3254
10	-3.3350	212.4738	6.7005	-3.3351	2.4249	212.4862	7.8891	2.4249
11	-3.7255	212.4673	7.3139	-3.7257	2.4458	212.4859	8.8846	2.4458
12	-4.3191	212.4561	8.2763	-4.3194	2.2987	212.4876	10.4628	2.2987
13	-4.9128	212.4432	9.2450	-4.9132	1.9597	212.4910	12.0354	1.9597
14	-5.5283	212.4281	10.2308	-5.5290	1.4511	212.4950	13.5911	1.4511
15	-6.1818	212.4101	11.2416	-6.1827	0.7896	212.4985	15.1223	0.7896
16	-6.8858	212.3884	12.2822	-6.8870	-0.0119	212.5000	16.6241	-0.0119
17	-7.6506	212.3622	13.3551	-7.6522	-0.9423	212.4979	18.0940	-0.9423
18	-8.4842	212.3306	14.4613	-8.4864	-1.9930	212.4907	19.5310	-1.9931
19	-9.3932	212.2923	15.6005	-9.3963	-3.1566	212.4766	20.9352	-3.1567
20	-10.3829	212.2462	16.7716	-10.3870	-4.4272	212.4539	22.3078	-4.4275
21	-11.4572	212.1909	17.9730	-11.4628	-5.7999	212.4208	23.6502	-5.8007
22	-12.6191	212.1250	19.2029	-12.6266	-7.2710	212.3756	24.9644	-7.2724
23	-13.8710	212.0468	20.4592	-13.8809	-8.8373	212.3162	26.2523	-8.8398
24	-15.2144	211.9546	21.7398	-15.2274	-10.4960	212.2406	27.5159	-10.5003
25	-16.6502	211.8467	23.0429	-16.6672	-12.2454	212.1469	28.7571	-12.2522
26	-18.1789	211.7210	24.3665	-18.2012	-14.0835	212.0328	29.9779	-14.0938
27	-19.8010	211.5755	25.7089	-19.8297	-16.0091	211.8961	31.1799	-16.0243
28	-21.5162	211.4079	27.0686	-21.5531	-18.0208	211.7345	32.3645	-18.0425
29	-23.3241	211.2161	28.4442	-23.3712	-20.1177	211.5456	33.5333	-20.1478
30	-25.2242	210.9976	29.8345	-25.2838	-22.2986	211.3268	34.6873	-22.3398
31	-27.2158	210.7500	31.2384	-27.2907	-24.5629	211.0756	35.8278	-24.6179
32	-29.2979	210.4706	32.6550	-29.3916	-26.9096	210.7893	36.9554	-26.9820
33	-31.4696	210.1569	34.0836	-31.5858	-29.3379	210.4650	38.0710	-29.4319
34	-33.7297	209.8060	35.5237	-33.8730	-31.8469	210.1000	39.1749	-31.9673
35	-36.0769	209.4152	36.9747	-36.2525	-34.4358	209.6913	40.2679	-34.5883
36	-38.5100	208.9814	38.4365	-38.7240	-37.1038	209.2357	41.3500	-37.2950
37	-41.0276	208.5018	39.9088	-41.2869	-39.8499	208.7300	42.4214	-40.0873
38	-43.6287	207.9730	41.3918	-43.9412	-42.6737	208.1711	43.4821	-42.9658
39	-46.3120	207.3920	42.8853	-46.6867	-45.5744	207.5553	44.5320	-45.9313
40	-49.0775	206.7550	44.3895	-49.5247	-48.5525	206.8790	45.5709	-48.9852
41	-51.9290	206.0573	45.9048	-52.4602	-51.6120	206.1370	46.5980	-52.1334
42	-51.9755	206.0456	46.0399	-52.5082	-51.7700	206.0973	46.5508	-52.2963
43	-52.0381	206.0298	46.1371	-52.5728	-51.8809	206.0695	46.5282	-52.4107
44	-52.0600	206.0243	46.2517	-52.5953	-51.9749	206.0458	46.4633	-52.5076
45	-52.0378	206.0299	46.3662	-52.5724	-52.0378	206.0299	46.3662	-52.5724

X_{3D}, Y_{3D}, Z : Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D}, Z : Two-dimensional coordinate system (axial and circumferential coordinates)

付表 1.36　タービン動翼の座標(ミッドスパン, 測定位置 N_R=11, 半径 R=212.5mm)
ハブ側壁面からの距離 y=37.5mm, スパン方向位置 y/H=0.500

No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-6.9266	212.3871	12.6826	-6.9278	-6.9266	212.3871	12.6826	-6.9278
2	-6.6850	212.3948	12.8857	-6.6861	-7.2589	212.3760	12.6253	-7.2603
3	-6.5683	212.3985	13.1197	-6.5694	-7.5535	212.3657	12.6831	-7.5551
4	-6.4981	212.4006	13.4157	-6.4991	-7.8814	212.3538	12.8247	-7.8832
5	-6.4652	212.4016	13.7727	-6.4662	-8.2407	212.3402	13.0516	-8.2427
6	-6.4610	212.4018	14.1881	-6.4620	-8.6256	212.3249	13.3661	-8.6279
7	-6.4759	212.4013	14.6588	-6.4769	-9.0278	212.3081	13.7715	-9.0305
8	-6.4990	212.4006	15.1817	-6.5000	-9.4370	212.2904	14.2711	-9.4401
9	-6.5184	212.4000	15.7528	-6.5195	-9.8410	212.2720	14.8689	-9.8445
10	-6.5215	212.3999	16.3681	-6.5225	-10.2253	212.2538	15.5692	-10.2293
11	-6.4929	212.4008	17.0585	-6.4939	-10.5904	212.2359	16.4222	-10.5948
12	-6.3709	212.4045	18.0904	-6.3718	-10.9903	212.2156	17.8281	-10.9952
13	-6.1576	212.4108	19.0648	-6.1585	-11.1807	212.2057	19.2925	-11.1859
14	-5.8617	212.4191	19.9996	-5.8625	-11.1631	212.2066	20.7968	-11.1682
15	-5.4910	212.4290	20.9174	-5.4916	-10.9404	212.2182	22.3185	-10.9453
16	-5.0475	212.4400	21.8415	-5.0479	-10.5212	212.2394	23.8340	-10.5255
17	-4.5267	212.4518	22.7912	-4.5270	-9.9201	212.2683	25.3242	-9.9237
18	-3.9209	212.4638	23.7787	-3.9211	-9.1550	212.3027	26.7766	-9.1579
19	-3.2222	212.4756	24.8093	-3.2223	-8.2441	212.3400	28.1860	-8.2461
20	-2.4246	212.4862	25.8828	-2.4247	-7.2029	212.3779	29.5528	-7.2043
21	-1.5252	212.4945	26.9961	-1.5252	-6.0442	212.4140	30.8799	-6.0450
22	-0.5233	212.4994	28.1448	-0.5233	-4.7779	212.4463	32.1717	-4.7783
23	0.5796	212.4992	29.3245	0.5796	-3.4121	212.4726	33.4327	-3.4122
24	1.7808	212.4925	30.5309	1.7809	-1.9532	212.4910	34.6670	-1.9532
25	3.0769	212.4777	31.7605	3.0770	-0.4067	212.4996	35.8784	-0.4067
26	4.4638	212.4531	33.0098	4.4641	1.2226	212.4965	37.0700	1.2226
27	5.9371	212.4170	34.2766	5.9379	2.9302	212.4798	38.2444	2.9303
28	7.4927	212.3679	35.5583	7.4942	4.7122	212.4477	39.4036	4.7126
29	9.1258	212.3040	36.8535	9.1286	6.5645	212.3986	40.5495	6.5656
30	10.8322	212.2237	38.1604	10.8369	8.4836	212.3306	41.6836	8.4859
31	12.6076	212.1257	39.4779	12.6150	10.4658	212.2421	42.8070	10.4700
32	14.4476	212.0083	40.8050	14.4588	12.5078	212.1316	43.9208	12.5150
33	16.3484	211.8702	42.1408	16.3645	14.6064	211.9974	45.0256	14.6180
34	18.3058	211.7101	43.4847	18.3285	16.7585	211.8382	46.1222	16.7759
35	20.3162	211.5266	44.8363	20.3473	18.9611	211.6524	47.2112	18.9864
36	22.3759	211.3186	46.1951	22.4175	21.2117	211.4387	48.2927	21.2471
37	24.4818	211.0850	47.5610	24.5363	23.5078	211.1957	49.3671	23.5560
38	26.6307	210.8247	48.9336	26.7009	25.8473	210.9222	50.4345	25.9115
39	28.8201	210.5366	50.3132	28.9092	28.2285	210.6167	51.4952	28.3122
40	31.0479	210.2196	51.6998	31.1595	30.6502	210.2779	52.5490	30.7575
41	33.3136	209.8725	53.0935	33.4515	33.1127	209.9043	53.5958	33.2482
42	33.4381	209.8527	53.1507	33.5776	33.1894	209.8922	53.6430	33.3258
43	33.4942	209.8437	53.2527	33.6344	33.3038	209.8740	53.6294	33.4417
44	33.5075	209.8416	53.3686	33.6479	33.4044	209.8580	53.5726	33.5436
45	33.4760	209.8466	53.4810	33.6160	33.4760	209.8466	53.4810	33.6160

X_{3D}, Y_{3D}, Z : Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D}, Z : Two-dimensional coordinate system (axial and circumferential coordinates)



付図 1.13　タービン静翼・動翼の配置（原寸）と設計点における速度三角形
（測定位置 $N_R=12$，半径 $R=216.0$mm，スパン方向位置 $y/H=0.547$）

付表 1.37　タービン静翼・動翼の仕様（測定位置 $N_R=12$，半径 $R=216.0$mm）

		Nozzle	Rotor
Chord	C	67.67 mm	57.53 mm
Axial Chord	C_{ax}	42.97 mm	40.24 mm
Blade Pitch	S	48.47 mm	43.78 mm
Solidity	C/S	1.396	1.314
Inlet Blade Angle	α_1	0.00 deg	18.44 deg
Exit Blade Angle	α_2	67.09 deg	63.81 deg
Blade Turning Angle	$\alpha_2 - \alpha_1$	67.09 deg	82.25 deg
Stagger Angle	ξ	50.83 deg	45.90 deg
Trailing Edge Diameter	d_{TE}	0.6 mm	0.6 mm
Flow Coefficient	Φ	0.492	
Blade Loading Coefficient	ψ	1.164	
Reaction	Λ	0.418	
Nozzle / Rotor Axial Spacing	L_{NR}	28.10 mm	

付表 1.38　タービン静翼の座標（測定位置 N_R=12，半径 R=216.0mm）
ハブ側壁面からの距離 y=41.0mm，スパン方向位置 y/H=0.547

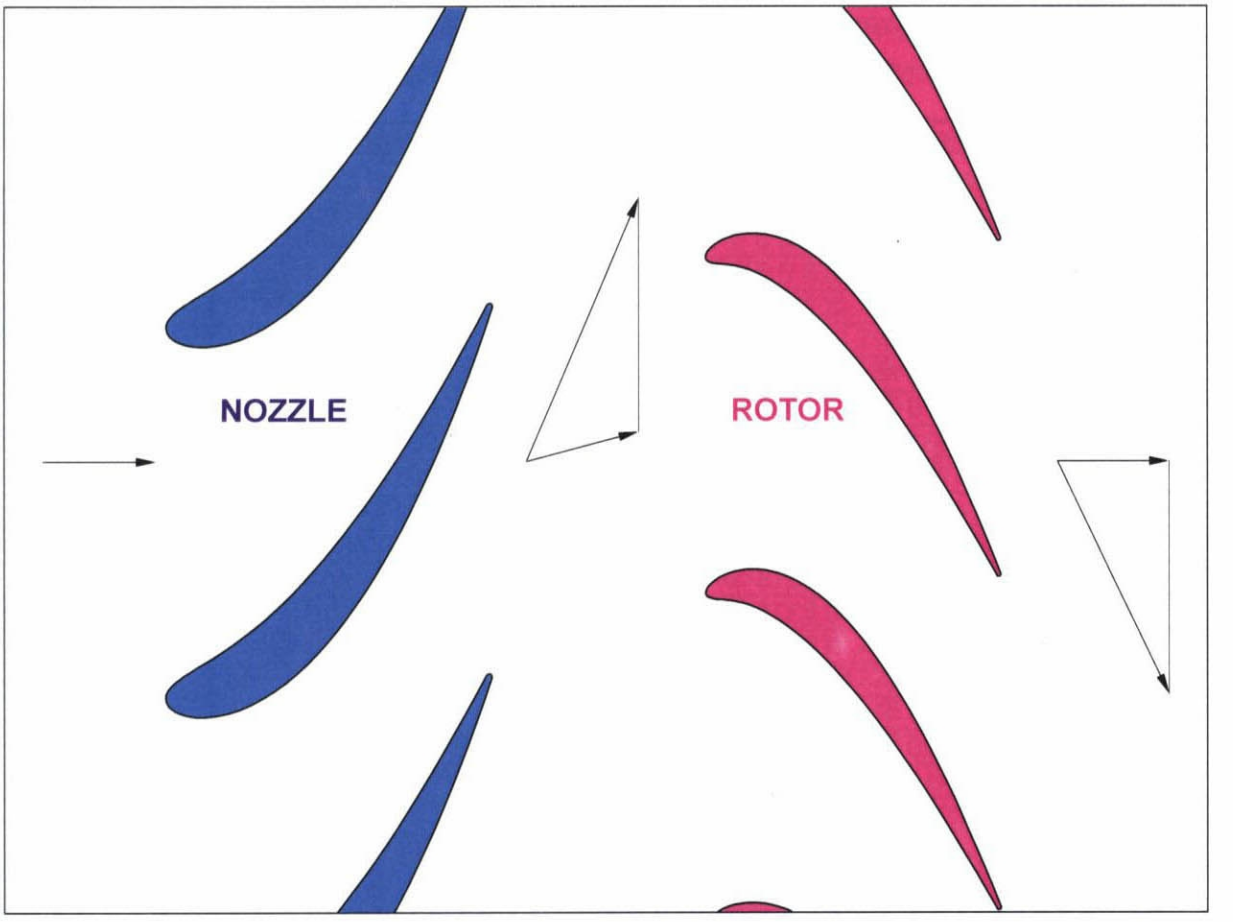
No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-0.1114	216.0000	3.6293	-0.1114	-0.1114	216.0000	3.6293	-0.1114
2	-0.6146	215.9991	3.7036	-0.6146	0.3915	215.9996	3.7083	0.3915
3	-0.9726	215.9978	3.8473	-0.9726	0.7466	215.9987	3.8711	0.7466
4	-1.3164	215.9960	4.0558	-1.3164	1.0809	215.9973	4.1223	1.0809
5	-1.6530	215.9937	4.3250	-1.6530	1.3949	215.9955	4.4660	1.3949
6	-1.9860	215.9909	4.6514	-1.9861	1.6838	215.9934	4.9058	1.6838
7	-2.3189	215.9876	5.0317	-2.3190	1.9405	215.9913	5.4449	1.9405
8	-2.6551	215.9837	5.4638	-2.6552	2.1557	215.9892	6.0855	2.1557
9	-2.9985	215.9792	5.9463	-2.9986	2.3186	215.9876	6.8290	2.3186
10	-3.3537	215.9740	6.4791	-3.3538	2.4170	215.9865	7.6755	2.4171
11	-3.7462	215.9675	7.0959	-3.7464	2.4362	215.9863	8.6765	2.4362
12	-4.3435	215.9563	8.0641	-4.3438	2.2854	215.9879	10.2631	2.2854
13	-4.9414	215.9435	9.0387	-4.9418	1.9418	215.9913	11.8438	1.9418
14	-5.5618	215.9284	10.0310	-5.5624	1.4278	215.9953	13.4072	1.4278
15	-6.2208	215.9104	11.0485	-6.2216	0.7602	215.9987	14.9458	0.7602
16	-6.9308	215.8888	12.0961	-6.9320	-0.0476	216.0000	16.4547	-0.0476
17	-7.7022	215.8626	13.1763	-7.7038	-0.9848	215.9978	17.9314	-0.9848
18	-8.5429	215.8310	14.2899	-8.5451	-2.0424	215.9903	19.3750	-2.0424
19	-9.4594	215.7928	15.4366	-9.4624	-3.2130	215.9761	20.7859	-3.2131
20	-10.4567	215.7467	16.6153	-10.4608	-4.4907	215.9533	22.1649	-4.4911
21	-11.5387	215.6916	17.8243	-11.5442	-5.8706	215.9202	23.5138	-5.8713
22	-12.7084	215.6258	19.0619	-12.7157	-7.3486	215.8750	24.8344	-7.3500
23	-13.9678	215.5479	20.3257	-13.9776	-8.9217	215.8157	26.1288	-8.9242
24	-15.3184	215.4561	21.6140	-15.3313	-10.5870	215.7404	27.3989	-10.5912
25	-16.7610	215.3487	22.9246	-16.7779	-12.3424	215.6471	28.6466	-12.3492
26	-18.2961	215.2237	24.2558	-18.3180	-14.1862	215.5336	29.8740	-14.1964
27	-19.9236	215.0792	25.6057	-19.9520	-16.1167	215.3979	31.0826	-16.1317
28	-21.6435	214.9129	26.9728	-21.6799	-18.1327	215.2376	32.2738	-18.1540
29	-23.4550	214.7228	28.3559	-23.5014	-20.2329	215.0503	33.4493	-20.2626
30	-25.3577	214.5064	29.7536	-25.4163	-22.4163	214.8337	34.6100	-22.4567
31	-27.3503	214.2614	31.1648	-27.4239	-24.6817	214.5852	35.7572	-24.7357
32	-29.4321	213.9854	32.5887	-29.5239	-27.0282	214.3023	36.8916	-27.0993
33	-31.6016	213.6758	34.0246	-31.7155	-29.4549	213.9823	38.0139	-29.5470
34	-33.8577	213.3299	35.4720	-33.9979	-31.9605	213.6224	39.1247	-32.0783
35	-36.1988	212.9452	36.9303	-36.3704	-34.5442	213.2198	40.2245	-34.6932
36	-38.6233	212.5188	38.3993	-38.8321	-37.2048	212.7717	41.3135	-37.3912
37	-41.1296	212.0480	39.8789	-41.3823	-39.9411	212.2751	42.3918	-40.1723
38	-43.7163	211.5299	41.3689	-44.0204	-42.7522	211.7268	43.4594	-43.0364
39	-46.3817	210.9615	42.8696	-46.7457	-45.6372	211.1238	44.5163	-45.9837
40	-49.1251	210.3396	44.3809	-49.5588	-48.5957	210.4625	45.5622	-49.0152
41	-51.9488	209.6600	45.9033	-52.4631	-51.6304	209.7386	46.5963	-52.1352
42	-51.9961	209.6483	46.0395	-52.5118	-51.7875	209.6999	46.5492	-52.2969
43	-52.0582	209.6329	46.1371	-52.5758	-51.8986	209.6724	46.5272	-52.4114
44	-52.0794	209.6276	46.2518	-52.5977	-51.9930	209.6491	46.4629	-52.5087
45	-52.0565	209.6333	46.3662	-52.5741	-52.0565	209.6333	46.3662	-52.5741

X_{3D} , Y_{3D} , Z　: Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D} , Z　: Two-dimensional coordinate system (axial and circumferential coordinates)

付表 1.39　タービン動翼の座標（測定位置 $N_R=12$，半径 $R=216.0$mm）
ハブ側壁面からの距離 $y=41.0$mm，スパン方向位置 $y/H=0.547$

No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-7.5714	215.8673	12.9882	-7.5729	-7.5714	215.8673	12.9882	-7.5729
2	-7.3233	215.8758	13.1690	-7.3247	-7.8981	215.8556	12.9504	-7.8998
3	-7.1946	215.8801	13.3855	-7.1959	-8.1806	215.8450	13.0202	-8.1826
4	-7.1071	215.8830	13.6635	-7.1084	-8.4902	215.8331	13.1718	-8.4924
5	-7.0522	215.8848	14.0018	-7.0535	-8.8252	215.8196	13.4064	-8.8276
6	-7.0219	215.8858	14.3978	-7.0232	-9.1799	215.8048	13.7267	-9.1826
7	-7.0073	215.8863	14.8489	-7.0085	-9.5464	215.7889	14.1354	-9.5495
8	-6.9982	215.8866	15.3519	-6.9994	-9.9148	215.7723	14.6358	-9.9183
9	-6.9836	215.8871	15.9034	-6.9849	-10.2734	215.7555	15.2314	-10.2773
10	-6.9517	215.8881	16.4998	-6.9529	-10.6086	215.7393	15.9261	-10.6128
11	-6.8859	215.8902	17.1717	-6.8871	-10.9185	215.7239	16.7689	-10.9232
12	-6.7126	215.8957	18.1813	-6.7137	-11.2378	215.7075	18.1517	-11.2429
13	-6.4552	215.9035	19.1407	-6.4561	-11.3564	215.7013	19.5856	-11.3616
14	-6.1200	215.9133	20.0661	-6.1209	-11.2769	215.7054	21.0538	-11.2820
15	-5.7134	215.9244	20.9780	-5.7141	-11.0027	215.7196	22.5359	-11.0075
16	-5.2364	215.9365	21.8975	-5.2369	-10.5422	215.7426	24.0106	-10.5464
17	-4.6845	215.9492	22.8419	-4.6849	-9.9092	215.7726	25.4606	-9.9126
18	-4.0504	215.9620	23.8223	-4.0506	-9.1201	215.8074	26.8746	-9.1228
19	-3.3265	215.9744	24.8434	-3.3266	-8.1916	215.8446	28.2482	-8.1936
20	-2.5072	215.9854	25.9048	-2.5073	-7.1381	215.8820	29.5815	-7.1394
21	-1.5896	215.9942	27.0037	-1.5896	-5.9713	215.9174	30.8775	-5.9721
22	-0.5730	215.9992	28.1361	-0.5730	-4.7003	215.9489	32.1402	-4.7006
23	0.5414	215.9993	29.2977	0.5414	-3.3323	215.9743	33.3738	-3.3325
24	1.7515	215.9929	30.4847	1.7515	-1.8735	215.9919	34.5821	-1.8735
25	3.0540	215.9784	31.6937	3.0541	-0.3287	215.9997	35.7686	-0.3287
26	4.4453	215.9543	32.9216	4.4456	1.2977	215.9961	36.9362	1.2977
27	5.9218	215.9188	34.1662	5.9226	3.0015	215.9791	38.0872	3.0016
28	7.4795	215.8705	35.4252	7.4810	4.7792	215.9471	39.2237	4.7796
29	9.1143	215.8076	36.6972	9.1170	6.6273	215.8983	40.3473	6.6283
30	10.8224	215.7287	37.9805	10.8269	8.5423	215.8310	41.4595	8.5445
31	12.5998	215.6322	39.2741	12.6070	10.5211	215.7436	42.5613	10.5252
32	14.4428	215.5166	40.5771	14.4536	12.5606	215.6345	43.6538	12.5677
33	16.3477	215.3805	41.8885	16.3634	14.6581	215.5021	44.7376	14.6694
34	18.3110	215.2225	43.2079	18.3330	16.8106	215.3448	45.8133	16.8277
35	20.3294	215.0412	44.5349	20.3595	19.0158	215.1613	46.8814	19.0404
36	22.3995	214.8354	45.8689	22.4398	21.2710	214.9501	47.9423	21.3055
37	24.5184	214.6039	47.2098	24.5714	23.5743	214.7097	48.9961	23.6213
38	26.6836	214.3455	48.5576	26.7519	25.9238	214.4387	50.0431	25.9865
39	28.8927	214.0589	49.9122	28.9796	28.3181	214.1357	51.0833	28.3998
40	31.1440	213.7430	51.2737	31.2529	30.7561	213.7991	52.1167	30.8610
41	33.4372	213.3962	52.6423	33.5722	33.2387	213.4273	53.1432	33.3713
42	33.5617	213.3767	52.6973	33.6982	33.3162	213.4152	53.1912	33.4497
43	33.6185	213.3678	52.7989	33.7557	33.4306	213.3973	53.1769	33.5655
44	33.6326	213.3655	52.9147	33.7700	33.5308	213.3815	53.1194	33.6670
45	33.6018	213.3704	53.0273	33.7388	33.6018	213.3704	53.0273	33.7388

X_{3D} , Y_{3D} , Z　: Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D} , Z　: Two-dimensional coordinate system (axial and circumferential coordinates)



付図 1.14　タービン静翼・動翼の配置（原寸）と設計点における速度三角形
（測定位置 $N_R=13$，半径 $R=219.5$mm，スパン方向位置 $y/H=0.593$）

付表 1.40　タービン静翼・動翼の仕様（測定位置 $N_R=13$，半径 $R=219.5$mm）

		Nozzle	Rotor
Chord	C	67.81 mm	57.56 mm
Axial Chord	C_{ax}	43.20 mm	39.46 mm
Blade Pitch	S	49.26 mm	44.49 mm
Solidity	C/S	1.377	1.294
Inlet Blade Angle	α_1	0.00 deg	14.72 deg
Exit Blade Angle	α_2	66.76 deg	64.17 deg
Blade Turning Angle	$\alpha_2 - \alpha_1$	66.76 deg	78.89 deg
Stagger Angle	ξ	50.68 deg	46.97 deg
Trailing Edge Diameter	d_{TE}	0.6 mm	0.6 mm
Flow Coefficient	Φ	0.484	
Blade Loading Coefficient	ψ	1.127	
Reaction	Λ	0.436	
Nozzle / Rotor Axial Spacing	L_{NR}	28.43 mm	

付表 1.41　タービン静翼の座標（測定位置 $N_R=13$，半径 $R=219.5$mm）
ハブ側壁面からの距離 $y=44.5$mm，スパン方向位置 $y/H=0.593$

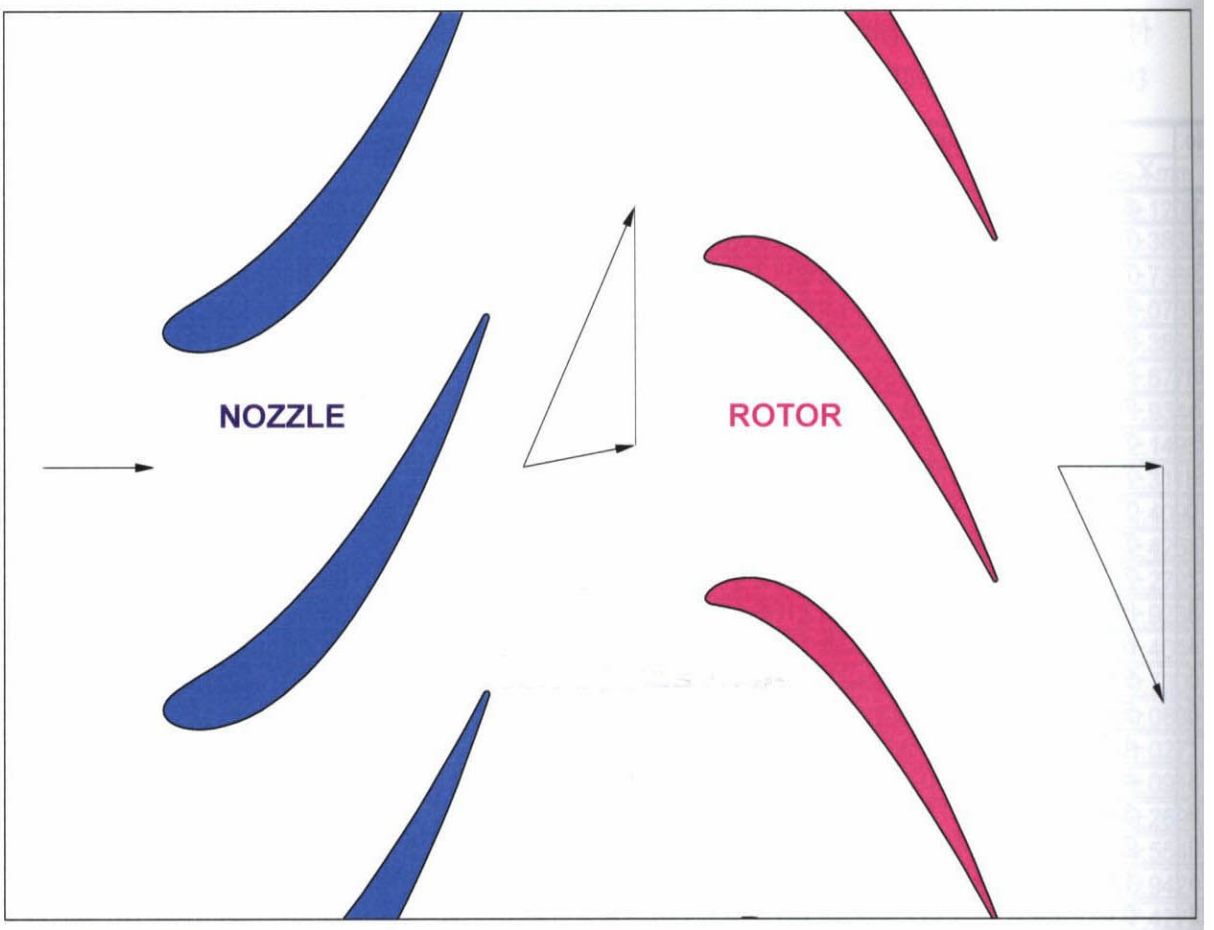
No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-0.1209	219.5000	3.3928	-0.1209	-0.1209	219.5000	3.3928	-0.1209
2	-0.6251	219.4991	3.4675	-0.6251	0.3830	219.4997	3.4722	0.3830
3	-0.9839	219.4978	3.6119	-0.9839	0.7389	219.4988	3.6360	0.7389
4	-1.3284	219.4960	3.8215	-1.3284	1.0738	219.4974	3.8886	1.0738
5	-1.6658	219.4937	4.0922	-1.6658	1.3883	219.4956	4.2342	1.3883
6	-1.9997	219.4909	4.4203	-1.9998	1.6776	219.4936	4.6766	1.6776
7	-2.3336	219.4876	4.8026	-2.3336	1.9344	219.4915	5.2188	1.9344
8	-2.6709	219.4837	5.2369	-2.6710	2.1495	219.4895	5.8630	2.1495
9	-3.0156	219.4793	5.7220	-3.0157	2.3118	219.4878	6.6107	2.3118
10	-3.3724	219.4741	6.2577	-3.3725	2.4092	219.4868	7.4620	2.4092
11	-3.7669	219.4677	6.8780	-3.7671	2.4265	219.4866	8.4685	2.4266
12	-4.3678	219.4565	7.8518	-4.3681	2.2721	219.4882	10.0634	2.2721
13	-4.9699	219.4437	8.8325	-4.9704	1.9238	219.4916	11.6522	1.9238
14	-5.5952	219.4287	9.8311	-5.5958	1.4044	219.4955	13.2233	1.4044
15	-6.2597	219.4107	10.8554	-6.2605	0.7309	219.4988	14.7692	0.7309
16	-6.9759	219.3891	11.9100	-6.9770	-0.0833	219.5000	16.2852	-0.0833
17	-7.7539	219.3630	12.9974	-7.7555	-1.0272	219.4976	17.7688	-1.0272
18	-8.6016	219.3314	14.1184	-8.6038	-2.0917	219.4900	19.2191	-2.0918
19	-9.5255	219.2932	15.2727	-9.5285	-3.2694	219.4756	20.6365	-3.2695
20	-10.5305	219.2473	16.4590	-10.5345	-4.5543	219.4527	22.0220	-4.5546
21	-11.6203	219.1922	17.6757	-11.6257	-5.9412	219.4196	23.3774	-5.9420
22	-12.7976	219.1266	18.9208	-12.8049	-7.4263	219.3743	24.7045	-7.4277
23	-14.0646	219.0489	20.1923	-14.0743	-9.0061	219.3152	26.0053	-9.0086
24	-15.4225	218.9575	21.4882	-15.4352	-10.6779	219.2401	27.2819	-10.6821
25	-16.8719	218.8506	22.8064	-16.8886	-12.4395	219.1472	28.5362	-12.4461
26	-18.4132	218.7263	24.1451	-18.4348	-14.2888	219.0344	29.7701	-14.2989
27	-20.0463	218.5827	25.5025	-20.0742	-16.2243	218.8996	30.9852	-16.2392
28	-21.7708	218.4177	26.8771	-21.8066	-18.2445	218.7405	32.1832	-18.2656
29	-23.5860	218.2291	28.2676	-23.6316	-20.3482	218.5548	33.3653	-20.3774
30	-25.4911	218.0148	29.6726	-25.5487	-22.5339	218.3403	34.5327	-22.5736
31	-27.4849	217.7724	31.0912	-27.5572	-24.8005	218.0944	35.6867	-24.8536
32	-29.5662	217.4996	32.5225	-29.6564	-27.1469	217.8148	36.8278	-27.2166
33	-31.7336	217.1940	33.9657	-31.8452	-29.5719	217.4989	37.9569	-29.6621
34	-33.9857	216.8530	35.4204	-34.1230	-32.0742	217.1440	39.0746	-32.1894
35	-36.3206	216.4742	36.8859	-36.4884	-34.6525	216.7474	40.1812	-34.7981
36	-38.7365	216.0549	38.3622	-38.9404	-37.3057	216.3066	41.2770	-37.4877
37	-41.2315	215.5927	39.8489	-41.4779	-40.0322	215.8186	42.3622	-40.2575
38	-43.8038	215.0848	41.3461	-44.0999	-42.8307	215.2807	43.4368	-43.1072
39	-46.4513	214.5286	42.8539	-46.8052	-45.6998	214.6900	44.5006	-46.0366
40	-49.1726	213.9213	44.3723	-49.5934	-48.6387	214.0433	45.5535	-49.0458
41	-51.9686	213.2593	45.9017	-52.4668	-51.6489	213.3369	46.5947	-52.1378
42	-52.0166	213.2476	46.0391	-52.5162	-51.8049	213.2991	46.5476	-52.2983
43	-52.0782	213.2325	46.1371	-52.5796	-51.9163	213.2720	46.5263	-52.4129
44	-52.0989	213.2275	46.2519	-52.6009	-52.0112	213.2489	46.4625	-52.5106
45	-52.0753	213.2332	46.3662	-52.5766	-52.0753	213.2332	46.3662	-52.5766

X_{3D}, Y_{3D}, Z　: Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D}, Z　: Two-dimensional coordinate system (axial and circumferential coordinates)

付表 1.42　　タービン動翼の座標（測定位置 N_R=13，半径 R=219.5mm）
ハブ側壁面からの距離 y=44.5mm，スパン方向位置 y/H=0.593

No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-8.2159	219.3462	13.2936	-8.2178	-8.2159	219.3462	13.2936	-8.2178
2	-7.9613	219.3556	13.4522	-7.9631	-8.5370	219.3339	13.2754	-8.5391
3	-7.8206	219.3606	13.6512	-7.8223	-8.8075	219.3232	13.3573	-8.8099
4	-7.7159	219.3643	13.9112	-7.7175	-9.0989	219.3113	13.5187	-9.1015
5	-7.6391	219.3670	14.2308	-7.6406	-9.4095	219.2982	13.7612	-9.4124
6	-7.5827	219.3690	14.6075	-7.5842	-9.7341	219.2841	14.0872	-9.7373
7	-7.5385	219.3705	15.0389	-7.5400	-10.0649	219.2691	14.4994	-10.0684
8	-7.4973	219.3719	15.5220	-7.4988	-10.3925	219.2538	15.0005	-10.3964
9	-7.4488	219.3736	16.0540	-7.4502	-10.7058	219.2388	15.5940	-10.7101
10	-7.3818	219.3758	16.6315	-7.3832	-10.9918	219.2246	16.2830	-10.9964
11	-7.2789	219.3793	17.2849	-7.2803	-11.2466	219.2117	17.1156	-11.2515
12	-7.0544	219.3866	18.2722	-7.0556	-11.4853	219.1993	18.4752	-11.4906
13	-6.7527	219.3961	19.2166	-6.7538	-11.5321	219.1969	19.8787	-11.5374
14	-6.3783	219.4073	20.1326	-6.3792	-11.3907	219.2042	21.3109	-11.3958
15	-5.9358	219.4197	21.0386	-5.9365	-11.0650	219.2209	22.7534	-11.0697
16	-5.4253	219.4329	21.9534	-5.4258	-10.5633	219.2457	24.1872	-10.5674
17	-4.8424	219.4466	22.8926	-4.8428	-9.8982	219.2767	25.5970	-9.9016
18	-4.1799	219.4602	23.8659	-4.1802	-9.0852	219.3119	26.9727	-9.0878
19	-3.4308	219.4732	24.8774	-3.4310	-8.1392	219.3490	28.3103	-8.1410
20	-2.5899	219.4847	25.9268	-2.5899	-7.0734	219.3860	29.6102	-7.0746
21	-1.6541	219.4938	27.0114	-1.6541	-5.8984	219.4207	30.8752	-5.8991
22	-0.6228	219.4991	28.1273	-0.6228	-4.6226	219.4513	32.1088	-4.6229
23	0.5033	219.4994	29.2708	0.5033	-3.2526	219.4759	33.3149	-3.2527
24	1.7221	219.4932	30.4384	1.7221	-1.7938	219.4927	34.4972	-1.7938
25	3.0310	219.4791	31.6269	3.0311	-0.2507	219.4999	35.6588	-0.2507
26	4.4269	219.4554	32.8334	4.4272	1.3727	219.4957	36.8023	1.3727
27	5.9065	219.4205	34.0558	5.9072	3.0728	219.4785	37.9300	3.0729
28	7.4663	219.3730	35.2921	7.4678	4.8463	219.4465	39.0437	4.8467
29	9.1028	219.3112	36.5409	9.1054	6.6900	219.3980	40.1451	6.6910
30	10.8126	219.2335	37.8007	10.8170	8.6010	219.3314	41.2354	8.6032
31	12.5921	219.1385	39.0704	12.5990	10.5764	219.2450	42.3157	10.5805
32	14.4380	219.0246	40.3492	14.4484	12.6135	219.1373	43.3869	12.6204
33	16.3471	218.8904	41.6363	16.3623	14.7098	219.0066	44.4495	14.7208
34	18.3163	218.7345	42.9312	18.3376	16.8628	218.8513	45.5043	16.8795
35	20.3425	218.5553	44.2335	20.3718	19.0704	218.6700	46.5517	19.0944
36	22.4230	218.3517	45.5427	22.4622	21.3303	218.4611	47.5919	21.3640
37	24.5551	218.1222	46.8588	24.6066	23.6408	218.2232	48.6252	23.6867
38	26.7365	217.8656	48.1816	26.8030	26.0003	217.9547	49.6517	26.0615
39	28.9653	217.5805	49.5112	29.0500	28.4076	217.6540	50.6715	28.4875
40	31.2401	217.2655	50.8477	31.3465	30.8621	217.3195	51.6845	30.9647
41	33.5609	216.9192	52.1912	33.6930	33.3646	216.9494	52.6907	33.4944
42	33.6852	216.8999	52.2439	33.8189	33.4429	216.9374	52.7396	33.5737
43	33.7428	216.8909	52.3452	33.8771	33.5573	216.9197	52.7245	33.6894
44	33.7576	216.8886	52.4609	33.8921	33.6572	216.9042	52.6663	33.7905
45	33.7276	216.8933	52.5737	33.8618	33.7276	216.8933	52.5737	33.8618

X_{3D} , Y_{3D} , Z　　: Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D} , Z　　: Two-dimensional coordinate system (axial and circumferential coordinates)



付図 1.15　タービン静翼・動翼の配置（原寸）と設計点における速度三角形
（測定位置 $N_R=14$，半径 $R=223$mm，スパン方向位置 $y/H=0.640$）

付表 1.43　タービン静翼・動翼の仕様（測定位置 $N_R=14$，半径 $R=223$mm）

		Nozzle	Rotor
Chord	C	67.96 mm	57.62 mm
Axial Chord	C_{ax}	43.44 mm	38.69 mm
Blade Pitch	S	50.04 mm	45.20 mm
Solidity	C/S	1.358	1.275
Inlet Blade Angle	α_1	0.00 deg	10.94 deg
Exit Blade Angle	α_2	66.43 deg	64.52 deg
Blade Turning Angle	$\alpha_2 - \alpha_1$	66.43 deg	75.46 deg
Stagger Angle	ξ	50.52 deg	48.04 deg
Trailing Edge Diameter	d_{TE}	0.6 mm	0.6 mm
Flow Coefficient	Φ	0.476	
Blade Loading Coefficient	ψ	1.092	
Reaction	Λ	0.454	
Nozzle / Rotor Axial Spacing	L_{NR}	28.75 mm	

付表 1.44　タービン静翼の座標（測定位置 N_R=14，半径 R=223mm）
ハブ側壁面からの距離 y=48.0mm，スパン方向位置 y/H=0.640

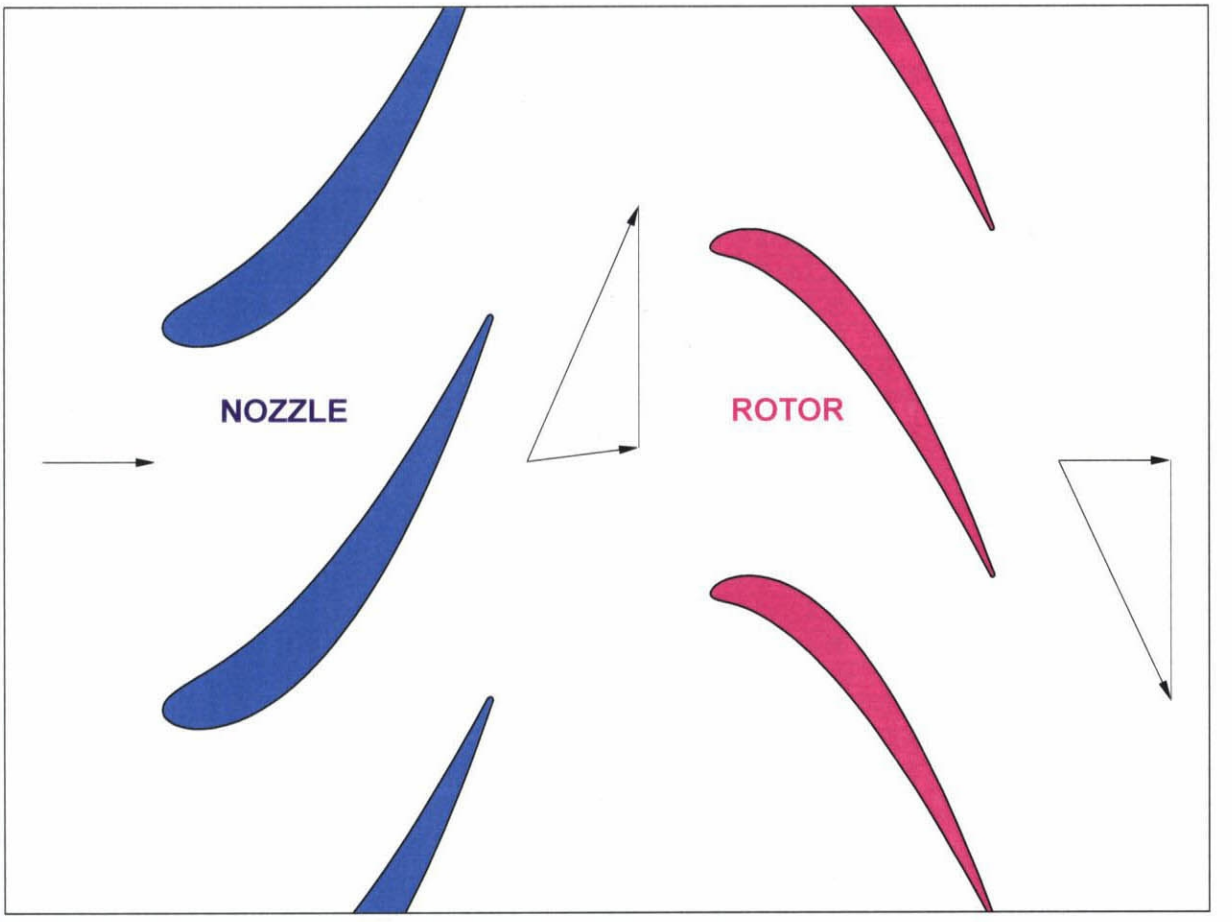
No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-0.1304	223.0000	3.1563	-0.1304	-0.1304	223.0000	3.1563	-0.1304
2	-0.6357	222.9991	3.2314	-0.6357	0.3746	222.9997	3.2361	0.3746
3	-0.9952	222.9978	3.3766	-0.9952	0.7311	222.9988	3.4008	0.7311
4	-1.3405	222.9960	3.5873	-1.3405	1.0667	222.9974	3.6549	1.0667
5	-1.6787	222.9937	3.8594	-1.6787	1.3818	222.9957	4.0024	1.3818
6	-2.0134	222.9909	4.1891	-2.0135	1.6714	222.9937	4.4473	1.6715
7	-2.3482	222.9876	4.5734	-2.3483	1.9284	222.9917	4.9926	1.9284
8	-2.6867	222.9838	5.0100	-2.6867	2.1433	222.9897	5.6406	2.1433
9	-3.0328	222.9794	5.4977	-3.0328	2.3050	222.9881	6.3925	2.3050
10	-3.3911	222.9742	6.0363	-3.3912	2.4013	222.9871	7.2484	2.4014
11	-3.7876	222.9678	6.6600	-3.7878	2.4169	222.9869	8.2604	2.4170
12	-4.3922	222.9567	7.6395	-4.3925	2.2588	222.9886	9.8638	2.2588
13	-4.9985	222.9440	8.6262	-4.9989	1.9058	222.9919	11.4605	1.9059
14	-5.6286	222.9290	9.6312	-5.6292	1.3811	222.9957	13.0393	1.3811
15	-6.2986	222.9110	10.6623	-6.2994	0.7016	222.9989	14.5927	0.7016
16	-7.0209	222.8895	11.7239	-7.0220	-0.1190	223.0000	16.1157	-0.1190
17	-7.8055	222.8634	12.8185	-7.8071	-1.0696	222.9974	17.6061	-1.0696
18	-8.6603	222.8318	13.9470	-8.6625	-2.1411	222.9897	19.0631	-2.1411
19	-9.5916	222.7936	15.1087	-9.5946	-3.3258	222.9752	20.4871	-3.3260
20	-10.6042	222.7477	16.3026	-10.6082	-4.6178	222.9522	21.8791	-4.6181
21	-11.7018	222.6928	17.5270	-11.7072	-6.0119	222.9189	23.2410	-6.0126
22	-12.8869	222.6273	18.7797	-12.8941	-7.5039	222.8737	24.5745	-7.5053
23	-14.1614	222.5499	20.0589	-14.1710	-9.0905	222.8146	25.8818	-9.0930
24	-15.5265	222.4588	21.3623	-15.5391	-10.7688	222.7398	27.1649	-10.7730
25	-16.9828	222.3524	22.6881	-16.9993	-12.5365	222.6473	28.4257	-12.5431
26	-18.5303	222.2288	24.0344	-18.5517	-14.3914	222.5351	29.6662	-14.4014
27	-20.1689	222.0861	25.3993	-20.1965	-16.3320	222.4011	30.8879	-16.3466
28	-21.8981	221.9222	26.7813	-21.9334	-18.3564	222.2432	32.0925	-18.3772
29	-23.7169	221.7352	28.1792	-23.7619	-20.4634	222.0591	33.2813	-20.4922
30	-25.6245	221.5229	29.5917	-25.6812	-22.6515	221.8466	34.4554	-22.6906
31	-27.6194	221.2830	31.0176	-27.6905	-24.9193	221.6033	35.6161	-24.9714
32	-29.7003	221.0133	32.4563	-29.7889	-27.2655	221.3269	36.7640	-27.3339
33	-31.8656	220.7115	33.9068	-31.9751	-29.6889	221.0149	37.9000	-29.7773
34	-34.1136	220.3753	35.3687	-34.2481	-32.1878	220.6648	39.0244	-32.3006
35	-36.4423	220.0022	36.8415	-36.6065	-34.7609	220.2741	40.1378	-34.9032
36	-38.8496	219.5899	38.3250	-39.0489	-37.4066	219.8403	41.2406	-37.5843
37	-41.3334	219.1359	39.8189	-41.5738	-40.1232	219.3607	42.3327	-40.3429
38	-43.8913	218.6379	41.3233	-44.1798	-42.9091	218.8328	43.4142	-43.1784
39	-46.5209	218.0936	42.8382	-46.8651	-45.7625	218.2540	44.4849	-46.0899
40	-49.2200	217.5003	44.3637	-49.6287	-48.6818	217.6214	45.5448	-49.0770
41	-51.9884	216.8553	45.9001	-52.4712	-51.6673	216.9320	46.5931	-52.1411
42	-52.0371	216.8436	46.0388	-52.5213	-51.8223	216.8950	46.5460	-52.3004
43	-52.0983	216.8289	46.1371	-52.5842	-51.9339	216.8683	46.5253	-52.4152
44	-52.1183	216.8241	46.2521	-52.6048	-52.0293	216.8455	46.4622	-52.5133
45	-52.0940	216.8299	46.3662	-52.5798	-52.0940	216.8299	46.3662	-52.5798

X_{3D}, Y_{3D}, Z : Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D}, Z : Two-dimensional coordinate system (axial and circumferential coordinates)

付表 1.45　　タービン動翼の座標（測定位置 N_R=14，半径 R=223mm）
ハブ側壁面からの距離 y=48.0mm，スパン方向位置 y/H=0.640

No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-8.8602	222.8239	13.5990	-8.8625	-8.8602	222.8239	13.5990	-8.8625
2	-8.5992	222.8341	13.7353	-8.6013	-9.1757	222.8111	13.6002	-9.1783
3	-8.4465	222.8400	13.9169	-8.4485	-9.4342	222.8003	13.6942	-9.4370
4	-8.3246	222.8446	14.1589	-8.3265	-9.7074	222.7886	13.8655	-9.7104
5	-8.2258	222.8482	14.4597	-8.2276	-9.9937	222.7760	14.1159	-9.9971
6	-8.1433	222.8513	14.8171	-8.1451	-10.2881	222.7626	14.4476	-10.2918
7	-8.0697	222.8539	15.2288	-8.0714	-10.5833	222.7487	14.8632	-10.5873
8	-7.9963	222.8566	15.6922	-7.9980	-10.8702	222.7349	15.3652	-10.8745
9	-7.9138	222.8595	16.2046	-7.9155	-11.1382	222.7217	15.9565	-11.1429
10	-7.8119	222.8631	16.7632	-7.8135	-11.3750	222.7097	16.6400	-11.3799
11	-7.6719	222.8680	17.3981	-7.6734	-11.5747	222.6994	17.4622	-11.5799
12	-7.3961	222.8773	18.3631	-7.3975	-11.7328	222.6911	18.7987	-11.7382
13	-7.0502	222.8885	19.2924	-7.0514	-11.7078	222.6925	20.1717	-11.7132
14	-6.6366	222.9012	20.1991	-6.6376	-11.5045	222.7030	21.5679	-11.5096
15	-6.1581	222.9150	21.0992	-6.1589	-11.1273	222.7222	22.9708	-11.1319
16	-5.6142	222.9293	22.0094	-5.6148	-10.5843	222.7487	24.3639	-10.5883
17	-5.0002	222.9439	22.9433	-5.0006	-9.8873	222.7807	25.7334	-9.8906
18	-4.3094	222.9584	23.9095	-4.3097	-9.0502	222.8163	27.0707	-9.0527
19	-3.5351	222.9720	24.9115	-3.5353	-8.0867	222.8533	28.3724	-8.0885
20	-2.6725	222.9840	25.9488	-2.6725	-7.0087	222.8898	29.6389	-7.0098
21	-1.7186	222.9934	27.0190	-1.7186	-5.8256	222.9239	30.8728	-5.8262
22	-0.6725	222.9990	28.1185	-0.6725	-4.5450	222.9537	32.0773	-4.5453
23	0.4651	222.9995	29.2440	0.4651	-3.1728	222.9774	33.2561	-3.1730
24	1.6927	222.9936	30.3921	1.6927	-1.7141	222.9934	34.4123	-1.7141
25	3.0080	222.9797	31.5601	3.0081	-0.1726	222.9999	35.5489	-0.1726
26	4.4085	222.9564	32.7452	4.4088	1.4478	222.9953	36.6684	1.4478
27	5.8912	222.9222	33.9455	5.8919	3.1441	222.9778	37.7728	3.1442
28	7.4532	222.8754	35.1590	7.4546	4.9134	222.9459	38.8638	4.9138
29	9.0914	222.8146	36.3846	9.0939	6.7527	222.8977	39.9429	6.7538
30	10.8028	222.7382	37.6208	10.8070	8.6597	222.8318	41.0114	8.6619
31	12.5843	222.6446	38.8666	12.5910	10.6316	222.7464	42.0701	10.6357
32	14.4332	222.5324	40.1213	14.4433	12.6663	222.6400	43.1199	12.6731
33	16.3465	222.4001	41.3841	16.3612	14.7615	222.5109	44.1615	14.7723
34	18.3215	222.2461	42.6544	18.3422	16.9150	222.3576	45.1954	16.9313
35	20.3557	222.0690	43.9321	20.3841	19.1250	222.1784	46.2220	19.1485
36	22.4465	221.8674	45.2166	22.4846	21.3896	221.9718	47.2416	21.4225
37	24.5917	221.6399	46.5078	24.6418	23.7072	221.7363	48.2543	23.7521
38	26.7893	221.3850	47.8057	26.8542	26.0768	221.4701	49.2603	26.1366
39	29.0378	221.1013	49.1104	29.1205	28.4971	221.1717	50.2597	28.5753
40	31.3361	220.7873	50.4218	31.4401	30.9680	220.8393	51.2524	31.0684
41	33.6845	220.4413	51.7402	33.8139	33.4905	220.4708	52.2383	33.6177
42	33.8088	220.4222	51.7907	33.9397	33.5697	220.4588	52.2881	33.6978
43	33.8670	220.4133	51.8916	33.9986	33.6840	220.4414	52.2722	33.8134
44	33.8826	220.4109	52.0072	34.0144	33.7835	220.4261	52.2133	33.9141
45	33.8534	220.4154	52.1203	33.9848	33.8534	220.4154	52.1203	33.9848

X_{3D} , Y_{3D} , Z　　: Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D} , Z　　: Two-dimensional coordinate system (axial and circumferential coordinates)



付図 1.16　タービン静翼・動翼の配置（原寸）と設計点における速度三角形
（測定位置 N_R=15，半径 R=226.5mm，スパン方向位置 y/H=0.687）

付表 1.46　タービン静翼・動翼の仕様（測定位置 N_R=15，半径 R=226.5mm）

		Nozzle	Rotor
Chord	C	68.10 mm	57.69 mm
Axial Chord	C_{ax}	43.67 mm	37.93 mm
Blade Pitch	S	50.83 mm	45.91 mm
Solidity	C/S	1.340	1.257
Inlet Blade Angle	α_1	0.00 deg	7.12 deg
Exit Blade Angle	α_2	66.10 deg	64.87 deg
Blade Turning Angle	$\alpha_2 - \alpha_1$	66.10 deg	71.99 deg
Stagger Angle	ξ	50.36 deg	49.11 deg
Trailing Edge Diameter	d_{TE}	0.6 mm	0.6 mm
Flow Coefficient	Φ	0.469	
Blade Loading Coefficient	ψ	1.059	
Reaction	Λ	0.471	
Nozzle / Rotor Axial Spacing	L_{NR}	29.06 mm	

付表 1.47　タービン静翼の座標（測定位置 $N_R=15$，半径 $R=226.5$mm）
ハブ側壁面からの距離 $y=51.5$mm，スパン方向位置 $y/H=0.687$

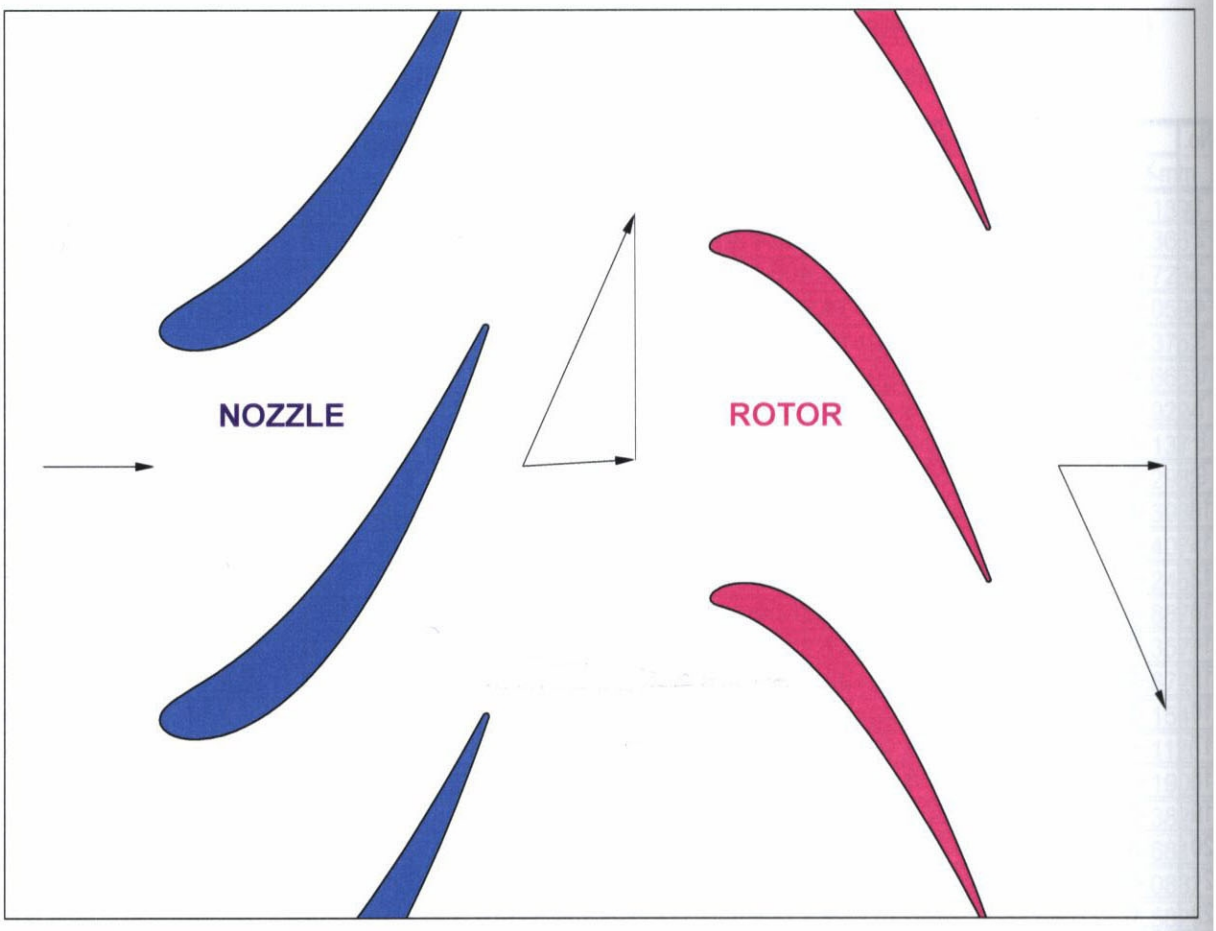
No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-0.1399	226.5000	2.9198	-0.1399	-0.1399	226.5000	2.9198	-0.1399
2	-0.6462	226.4991	2.9953	-0.6462	0.3661	226.4997	3.0001	0.3661
3	-1.0065	226.4978	3.1412	-1.0065	0.7234	226.4988	3.1656	0.7234
4	-1.3526	226.4960	3.3531	-1.3526	1.0596	226.4975	3.4211	1.0596
5	-1.6915	226.4937	3.6266	-1.6915	1.3752	226.4958	3.7707	1.3752
6	-2.0271	226.4909	3.9580	-2.0272	1.6653	226.4939	4.2181	1.6653
7	-2.3629	226.4877	4.3443	-2.3630	1.9223	226.4918	4.7665	1.9224
8	-2.7025	226.4839	4.7832	-2.7025	2.1370	226.4899	5.4181	2.1371
9	-3.0499	226.4795	5.2734	-3.0500	2.2982	226.4883	6.1742	2.2982
10	-3.4098	226.4743	5.8149	-3.4099	2.3934	226.4874	7.0348	2.3935
11	-3.8084	226.4680	6.4421	-3.8085	2.4073	226.4872	8.0523	2.4074
12	-4.4165	226.4569	7.4272	-4.4168	2.2455	226.4889	9.6641	2.2455
13	-5.0271	226.4442	8.4200	-5.0275	1.8879	226.4921	11.2689	1.8879
14	-5.6620	226.4292	9.4314	-5.6626	1.3577	226.4959	12.8554	1.3577
15	-6.3375	226.4113	10.4691	-6.3384	0.6723	226.4990	14.4161	0.6723
16	-7.0659	226.3898	11.5378	-7.0670	-0.1547	226.4999	15.9462	-0.1547
17	-7.8571	226.3637	12.6397	-7.8587	-1.1120	226.4973	17.4435	-1.1120
18	-8.7190	226.3321	13.7755	-8.7212	-2.1905	226.4894	18.9072	-2.1905
19	-9.6578	226.2940	14.9448	-9.6607	-3.3823	226.4747	20.3377	-3.3824
20	-10.6780	226.2482	16.1463	-10.6820	-4.6813	226.4516	21.7363	-4.6817
21	-11.7833	226.1933	17.3783	-11.7887	-6.0825	226.4183	23.1045	-6.0832
22	-12.9761	226.1280	18.6387	-12.9832	-7.5815	226.3731	24.4446	-7.5829
23	-14.2582	226.0508	19.9255	-14.2677	-9.1749	226.3141	25.7584	-9.1774
24	-15.6306	225.9600	21.2365	-15.6430	-10.8597	226.2395	27.0479	-10.8639
25	-17.0937	225.8541	22.5698	-17.1099	-12.6335	226.1474	28.3153	-12.6400
26	-18.6474	225.7311	23.9237	-18.6685	-14.4940	226.0358	29.5623	-14.5039
27	-20.2915	225.5892	25.2960	-20.3188	-16.4396	225.9026	30.7906	-16.4540
28	-22.0254	225.4266	26.6856	-22.0602	-18.4683	225.7458	32.0018	-18.4888
29	-23.8478	225.2410	28.0909	-23.8921	-20.5787	225.5632	33.1973	-20.6071
30	-25.7578	225.0306	29.5108	-25.8137	-22.7691	225.3527	34.3782	-22.8076
31	-27.7539	224.7932	30.9441	-27.8238	-25.0381	225.1119	35.5456	-25.0893
32	-29.8344	224.5265	32.3900	-29.9214	-27.3841	224.8385	36.7002	-27.4513
33	-31.9976	224.2285	33.8479	-32.1050	-29.8059	224.5303	37.8430	-29.8926
34	-34.2416	223.8968	35.3171	-34.3733	-32.3014	224.1849	38.9742	-32.4119
35	-36.5640	223.5292	36.7971	-36.7248	-34.8692	223.7999	40.0945	-35.0084
36	-38.9628	223.1236	38.2879	-39.1575	-37.5075	223.3729	41.2041	-37.6811
37	-41.4352	222.6777	39.7890	-41.6699	-40.2142	222.9015	42.3031	-40.4286
38	-43.9788	222.1894	41.3005	-44.2599	-42.9875	222.3833	43.3915	-43.2499
39	-46.5905	221.6564	42.8225	-46.9254	-45.8251	221.8159	44.4693	-46.1436
40	-49.2675	221.0768	44.3551	-49.6645	-48.7248	221.1971	45.5361	-49.1086
41	-52.0081	220.4482	45.8985	-52.4763	-51.6857	220.5240	46.5914	-52.1451
42	-52.0576	220.4365	46.0384	-52.5272	-51.8397	220.4879	46.5444	-52.3033
43	-52.1183	220.4222	46.1371	-52.5895	-51.9515	220.4615	46.5244	-52.4182
44	-52.1377	220.4176	46.2522	-52.6094	-52.0474	220.4389	46.4618	-52.5167
45	-52.1127	220.4235	46.3662	-52.5838	-52.1127	220.4235	46.3662	-52.5838

X_{3D}, Y_{3D}, Z　: Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D}, Z　: Two-dimensional coordinate system (axial and circumferential coordinates)

付表 1.48　タービン動翼の座標（測定位置 N_R=15，半径 R=226.5mm）
ハブ側壁面からの距離 y=51.5mm，スパン方向位置 y/H=0.687

No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-9.2368	226.3116	14.0183	-9.2393	-9.5043	226.3005	13.9042	-9.5071
2	-9.0721	226.3182	14.1824	-9.0745	-9.8142	226.2873	13.9250	-9.8172
3	-8.9330	226.3238	14.4064	-8.9353	-10.0607	226.2764	14.0310	-10.0641
4	-8.8123	226.3285	14.6885	-8.8145	-10.3157	226.2650	14.2123	-10.3193
5	-8.7038	226.3327	15.0267	-8.7059	-10.5778	226.2529	14.4705	-10.5817
6	-8.6007	226.3366	15.4187	-8.6027	-10.8421	226.2404	14.8080	-10.8463
7	-8.4953	226.3406	15.8623	-8.4973	-11.1017	226.2278	15.2270	-11.1061
8	-8.3788	226.3450	16.3551	-8.3807	-11.3479	226.2156	15.7298	-11.3526
9	-8.2419	226.3500	16.8949	-8.2438	-11.5706	226.2043	16.3190	-11.5756
10	-8.0648	226.3564	17.5113	-8.0665	-11.7582	226.1946	16.9968	-11.7634
11	-7.7378	226.3678	18.4540	-7.7393	-11.9028	226.1870	17.8089	-11.9083
12	-7.3478	226.3808	19.3683	-7.3490	-11.9803	226.1829	19.1223	-11.9859
13	-6.8949	226.3950	20.2656	-6.8960	-11.8835	226.1880	20.4648	-11.8890
14	-6.3805	226.4101	21.1598	-6.3813	-11.6182	226.2018	21.8249	-11.6233
15	-5.8031	226.4256	22.0653	-5.8038	-11.1896	226.2234	23.1883	-11.1942
16	-5.1580	226.4413	22.9940	-5.1585	-10.6054	226.2516	24.5405	-10.6093
17	-4.4389	226.4565	23.9531	-4.4392	-9.8764	226.2846	25.8698	-9.8796
18	-3.6395	226.4708	24.9455	-3.6396	-9.0153	226.3205	27.1687	-9.0177
19	-2.7551	226.4832	25.9707	-2.7552	-8.0343	226.3575	28.4345	-8.0360
20	-1.7830	226.4930	27.0266	-1.7830	-6.9439	226.3935	29.6676	-6.9450
21	-0.7222	226.4988	28.1097	-0.7222	-5.7527	226.4269	30.8704	-5.7533
22	0.4269	226.4996	29.2172	0.4269	-4.4673	226.4559	32.0459	-4.4676
23	1.6633	226.4939	30.3459	1.6633	-3.0931	226.4789	33.1972	-3.0932
24	2.9851	226.4803	31.4933	2.9852	-1.6344	226.4941	34.3274	-1.6344
25	4.3900	226.4575	32.6569	4.3903	-0.0946	226.5000	35.4391	-0.0946
26	5.8759	226.4238	33.8351	5.8765	1.5229	226.4949	36.5345	1.5229
27	7.4400	226.3778	35.0259	7.4414	3.2154	226.4772	37.6156	3.2155
28	9.0799	226.3179	36.2283	9.0823	4.9804	226.4452	38.6838	4.9808
29	10.7929	226.2427	37.4409	10.7970	6.8155	226.3974	39.7407	6.8165
30	12.5766	226.1506	38.6629	12.5831	8.7184	226.3321	40.7873	8.7205
31	14.4284	226.0400	39.8934	14.4381	10.6869	226.2477	41.8244	10.6909
32	16.3459	225.9094	41.1319	16.3601	12.7191	226.1426	42.8530	12.7258
33	18.3268	225.7573	42.3777	18.3468	14.8132	226.0151	43.8735	14.8238
34	20.3689	225.5823	43.6307	20.3964	16.9672	225.8636	44.8864	16.9831
35	22.4700	225.3827	44.8905	22.5070	19.1796	225.6865	45.8923	19.2026
36	24.6283	225.1570	46.1569	24.6771	21.4488	225.4821	46.8913	21.4810
37	26.8422	224.9039	47.4299	26.9054	23.7737	225.2489	47.8834	23.8176
38	29.1104	224.6215	48.7096	29.1911	26.1532	224.9850	48.8690	26.2117
39	31.4321	224.3084	49.9960	31.5338	28.5867	224.6888	49.8481	28.6631
40	33.8080	223.9626	51.2894	33.9348	31.0739	224.3583	50.8204	31.1722
41	33.9323	223.9439	51.3376	34.0605	33.6164	223.9915	51.7860	33.7411
42	33.9912	223.9349	51.4381	34.1201	33.6964	223.9795	51.8367	33.8219
43	34.0076	223.9324	51.5537	34.1367	33.8106	223.9623	51.8200	33.9375
44	33.9791	223.9368	51.6669	34.1079	33.9099	223.9473	51.7604	34.0378
45	-9.2368	226.3116	14.0183	-9.2393	33.9791	223.9368	51.6669	34.1079

X_{3D}, Y_{3D}, Z　: Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D}, Z　: Two-dimensional coordinate system (axial and circumferential coordinates)



付図 1.17　タービン静翼・動翼の配置（原寸）と設計点における速度三角形
（測定位置 $N_R=16$，半径 $R=230$mm，スパン方向位置 $y/H=0.733$）

付表 1.49　タービン静翼・動翼の仕様（測定位置 $N_R=16$，半径 $R=230$mm）

		Nozzle	Rotor
Chord	C	68.25 mm	57.79 mm
Axial Chord	C_{ax}	43.91 mm	37.18 mm
Blade Pitch	S	51.61 mm	46.62 mm
Solidity	C/S	1.322	1.240
Inlet Blade Angle	α_1	0.00 deg	3.30 deg
Exit Blade Angle	α_2	65.77 deg	65.21 deg
Blade Turning Angle	$\alpha_2 - \alpha_1$	65.77 deg	68.50 deg
Stagger Angle	ξ	50.21 deg	50.18 deg
Trailing Edge Diameter	d_{TE}	0.6 mm	0.6 mm
Flow Coefficient	Φ	0.462	
Blade Loading Coefficient	ψ	1.027	
Reaction	Λ	0.487	
Nozzle / Rotor Axial Spacing	L_{NR}	29.36 mm	

付表 1.50　　タービン静翼の座標（測定位置 $N_R=16$，半径 $R=230$mm）
ハブ側壁面からの距離 $y=55.0$mm，スパン方向位置 $y/H=0.733$

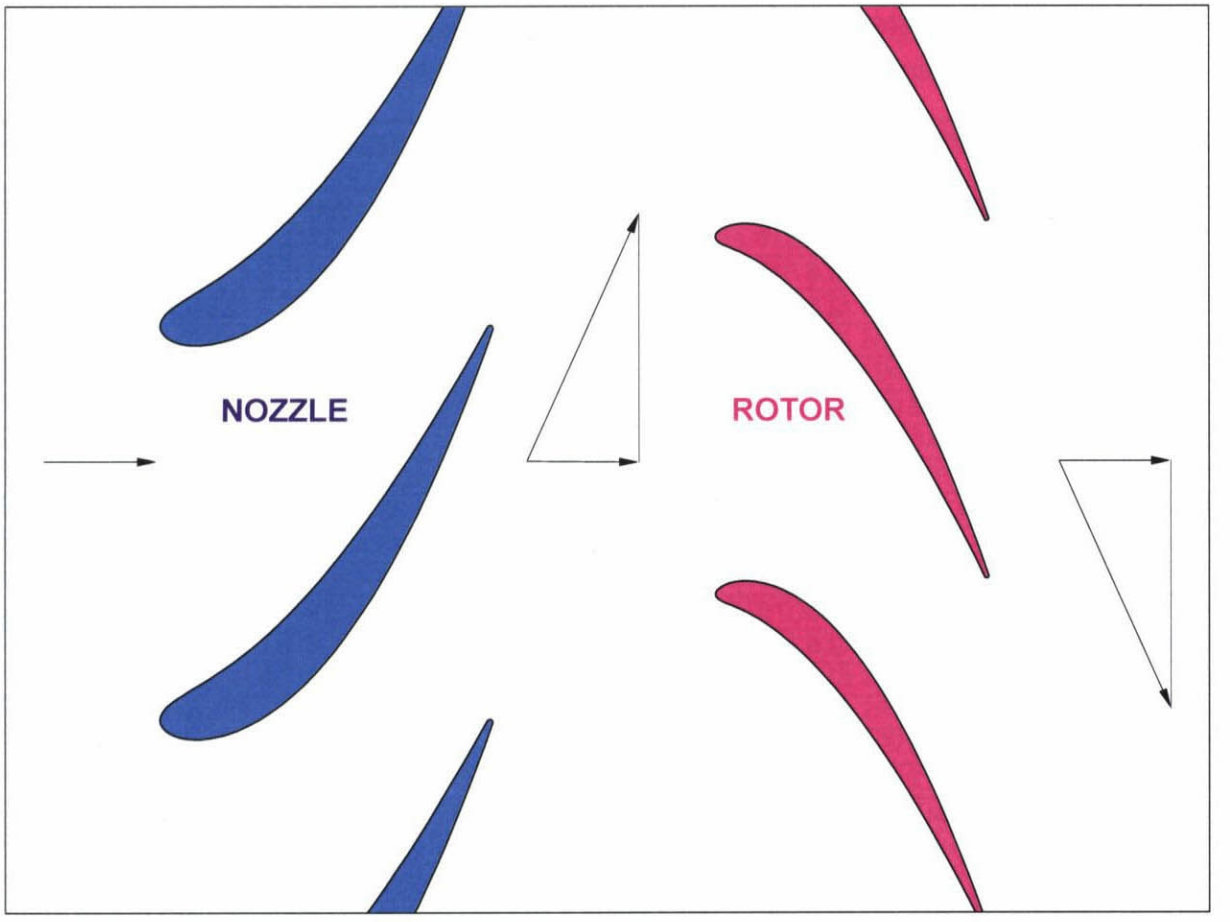
No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-0.1494	230.0000	2.6833	-0.1494	-0.1494	230.0000	2.6833	-0.1494
2	-0.6568	229.9991	2.7592	-0.6568	0.3576	229.9997	2.7640	0.3576
3	-1.0178	229.9977	2.9059	-1.0178	0.7156	229.9989	2.9305	0.7156
4	-1.3646	229.9960	3.1188	-1.3646	1.0525	229.9976	3.1874	1.0525
5	-1.7043	229.9937	3.3938	-1.7044	1.3686	229.9959	3.5389	1.3686
6	-2.0408	229.9909	3.7269	-2.0409	1.6591	229.9940	3.9889	1.6591
7	-2.3776	229.9877	4.1152	-2.3776	1.9163	229.9920	4.5403	1.9163
8	-2.7183	229.9839	4.5563	-2.7183	2.1308	229.9901	5.1956	2.1309
9	-3.0670	229.9796	5.0491	-3.0671	2.2914	229.9886	5.9559	2.2915
10	-3.4285	229.9744	5.5935	-3.4286	2.3856	229.9876	6.8213	2.3856
11	-3.8291	229.9681	6.2241	-3.8292	2.3977	229.9875	7.8442	2.3978
12	-4.4409	229.9571	7.2150	-4.4411	2.2322	229.9892	9.4644	2.2322
13	-5.0556	229.9444	8.2137	-5.0560	1.8699	229.9924	11.0773	1.8700
14	-5.6955	229.9295	9.2315	-5.6961	1.3344	229.9961	12.6715	1.3344
15	-6.3765	229.9116	10.2760	-6.3773	0.6430	229.9991	14.2396	0.6430
16	-7.1109	229.8900	11.3517	-7.1120	-0.1905	229.9999	15.7768	-0.1905
17	-7.9088	229.8640	12.4608	-7.9103	-1.1544	229.9971	17.2809	-1.1545
18	-8.7778	229.8324	13.6041	-8.7799	-2.2398	229.9891	18.7512	-2.2398
19	-9.7239	229.7944	14.7809	-9.7268	-3.4387	229.9743	20.1883	-3.4388
20	-10.7518	229.7486	15.9900	-10.7557	-4.7449	229.9511	21.5934	-4.7452
21	-11.8649	229.6938	17.2296	-11.8701	-6.1531	229.9177	22.9681	-6.1539
22	-13.0654	229.6286	18.4976	-13.0724	-7.6591	229.8724	24.3146	-7.6605
23	-14.3550	229.5516	19.7920	-14.3644	-9.2593	229.8135	25.6349	-9.2618
24	-15.7346	229.4612	21.1107	-15.7469	-10.9506	229.7392	26.9309	-10.9547
25	-17.2045	229.3556	22.4516	-17.2206	-12.7305	229.6474	28.2048	-12.7370
26	-18.7645	229.2333	23.8130	-18.7854	-14.5967	229.5364	29.4584	-14.6065
27	-20.4142	229.0923	25.1928	-20.4411	-16.5472	229.4040	30.6933	-16.5615
28	-22.1527	228.9307	26.5898	-22.1871	-18.5801	229.2483	31.9112	-18.6004
29	-23.9788	228.7466	28.0026	-24.0224	-20.6939	229.0672	33.1134	-20.7219
30	-25.8912	228.5381	29.4299	-25.9462	-22.8866	228.8585	34.3009	-22.9246
31	-27.8884	228.3030	30.8705	-27.9572	-25.1568	228.6201	35.4750	-25.2073
32	-29.9685	228.0392	32.3238	-30.0540	-27.5027	228.3497	36.6365	-27.5687
33	-32.1295	227.7448	33.7890	-32.2350	-29.9228	228.0452	37.7860	-30.0078
34	-34.3695	227.4175	35.2655	-34.4987	-32.4149	227.7044	38.9241	-32.5232
35	-36.6858	227.0554	36.7528	-36.8431	-34.9775	227.3248	40.0512	-35.1137
36	-39.0759	226.6563	38.2507	-39.2663	-37.6083	226.9044	41.1677	-37.7780
37	-41.5370	226.2182	39.7590	-41.7662	-40.3052	226.4409	42.2736	-40.5144
38	-44.0662	225.7392	41.2778	-44.3404	-43.0659	225.9321	43.3689	-43.3216
39	-46.6600	225.2173	42.8069	-46.9861	-45.8877	225.3760	44.4536	-46.1977
40	-49.3149	224.6509	44.3465	-49.7008	-48.7678	224.7703	45.5274	-49.1408
41	-52.0279	224.0382	45.8969	-52.4821	-51.7040	224.1131	46.5898	-52.1497
42	-52.0781	224.0265	46.0380	-52.5337	-51.8570	224.0778	46.5428	-52.3068
43	-52.1383	224.0125	46.1371	-52.5955	-51.9692	224.0518	46.5234	-52.4219
44	-52.1570	224.0081	46.2523	-52.6147	-52.0655	224.0294	46.4614	-52.5207
45	-52.1314	224.0141	46.3662	-52.5885	-52.1314	224.0141	46.3662	-52.5885

X_{3D} , Y_{3D} , Z　　: Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D} , Z　　: Two-dimensional coordinate system (axial and circumferential coordinates)

付表 1.51　タービン動翼の座標（測定位置 $N_R=16$，半径 $R=230$mm）
ハブ側壁面からの距離 $y=55.0$mm，スパン方向位置 $y/H=0.733$

No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-10.1482	229.7760	14.2094	-10.1515	-10.1482	229.7760	14.2094	-10.1515
2	-9.8742	229.7879	14.3013	-9.8772	-10.4525	229.7624	14.2497	-10.4561
3	-9.6976	229.7955	14.4479	-9.7005	-10.6871	229.7516	14.3678	-10.6909
4	-9.5413	229.8020	14.6539	-9.5440	-10.9239	229.7404	14.5589	-10.9280
5	-9.3987	229.8079	14.9173	-9.4013	-11.1618	229.7290	14.8251	-11.1662
6	-9.2642	229.8133	15.2363	-9.2667	-11.3960	229.7175	15.1683	-11.4006
7	-9.1316	229.8187	15.6086	-9.1340	-11.6199	229.7063	15.5908	-11.6249
8	-8.9941	229.8241	16.0324	-8.9964	-11.8254	229.6958	16.0944	-11.8306
9	-8.8438	229.8299	16.5056	-8.8459	-12.0029	229.6866	16.6814	-12.0084
10	-8.6719	229.8365	17.0265	-8.6740	-12.1413	229.6793	17.3537	-12.1470
11	-8.4577	229.8444	17.6244	-8.4596	-12.2309	229.6746	18.1556	-12.2367
12	-8.0795	229.8580	18.5449	-8.0812	-12.2278	229.6747	19.4458	-12.2336
13	-7.6453	229.8729	19.4442	-7.6467	-12.0592	229.6836	20.7579	-12.0647
14	-7.1532	229.8887	20.3320	-7.1543	-11.7320	229.7006	22.0819	-11.7371
15	-6.6028	229.9052	21.2204	-6.6037	-11.2519	229.7246	23.4057	-11.2564
16	-5.9920	229.9219	22.1213	-5.9927	-10.6264	229.7544	24.7171	-10.6302
17	-5.3159	229.9386	23.0447	-5.3164	-9.8655	229.7883	26.0062	-9.8685
18	-4.5684	229.9546	23.9967	-4.5687	-8.9804	229.8246	27.2668	-8.9827
19	-3.7438	229.9695	24.9796	-3.7440	-7.9818	229.8615	28.4966	-7.9834
20	-2.8377	229.9825	25.9927	-2.8378	-6.8792	229.8971	29.6964	-6.8802
21	-1.8475	229.9926	27.0342	-1.8475	-5.6798	229.9299	30.8681	-5.6804
22	-0.7720	229.9987	28.1010	-0.7720	-4.3897	229.9581	32.0144	-4.3899
23	0.3888	229.9997	29.1904	0.3888	-3.0134	229.9803	33.1384	-3.0134
24	1.6339	229.9942	30.2996	1.6339	-1.5547	229.9947	34.2425	-1.5547
25	2.9621	229.9809	31.4265	2.9622	-0.0166	230.0000	35.3292	-0.0166
26	4.3716	229.9585	32.5687	4.3719	1.5979	229.9944	36.4007	1.5979
27	5.8606	229.9253	33.7247	5.8612	3.2867	229.9765	37.4584	3.2868
28	7.4269	229.8801	34.8929	7.4282	5.0475	229.9446	38.5039	5.0479
29	9.0684	229.8212	36.0720	9.0707	6.8782	229.8971	39.5385	6.8792
30	10.7831	229.7471	37.2611	10.7871	8.7771	229.8325	40.5632	8.7792
31	12.5688	229.6563	38.4592	12.5751	10.7422	229.7490	41.5788	10.7461
32	14.4235	229.5473	39.6656	14.4330	12.7719	229.6451	42.5860	12.7785
33	16.3453	229.4185	40.8797	16.3591	14.8649	229.5191	43.5855	14.8752
34	18.3320	229.2683	42.1011	18.3515	17.0193	229.3694	44.5775	17.0349
35	20.3820	229.0951	43.3294	20.4088	19.2342	229.1943	45.5627	19.2567
36	22.4935	228.8974	44.5645	22.5295	21.5081	228.9921	46.5410	21.5396
37	24.6650	228.6737	45.8060	24.7125	23.8402	228.7611	47.5126	23.8831
38	26.8951	228.4221	47.0541	26.9568	26.2297	228.4995	48.4778	26.2869
39	29.1829	228.1411	48.3088	29.2618	28.6762	228.2053	49.4364	28.7510
40	31.5281	227.8288	49.5702	31.6276	31.1798	227.8768	50.3885	31.2761
41	33.9316	227.4833	50.8386	34.0559	33.7423	227.5114	51.3338	33.8645
42	34.0558	227.4647	50.8846	34.1815	33.8231	227.4995	51.3853	33.9462
43	34.1154	227.4558	50.9847	34.2418	33.9373	227.4824	51.3679	34.0616
44	34.1326	227.4532	51.1002	34.2592	34.0361	227.4677	51.3076	34.1616
45	34.1048	227.4574	51.2136	34.2310	34.1048	227.4574	51.2136	34.2310

X_{3D}, Y_{3D}, Z : Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D}, Z : Two-dimensional coordinate system (axial and circumferential coordinates)



付図 1.18　タービン静翼・動翼の配置（原寸）と設計点における速度三角形
（測定位置 $N_R=17$，半径 $R=233.5$mm，スパン方向位置 $y/H=0.780$）

付表 1.52　タービン静翼・動翼の仕様（測定位置 $N_R=17$，半径 $R=233.5$mm）

		Nozzle	Rotor
Chord	C	68.40 mm	57.90 mm
Axial Chord	C_{ax}	44.14 mm	36.42 mm
Blade Pitch	S	52.40 mm	47.33 mm
Solidity	C/S	1.305	1.223
Inlet Blade Angle	α_1	0.00 deg	-0.50 deg
Exit Blade Angle	α_2	65.45 deg	65.53 deg
Blade Turning Angle	$\alpha_2 - \alpha_1$	65.45 deg	65.04 deg
Stagger Angle	ξ	50.05 deg	51.24 deg
Trailing Edge Diameter	d_{TE}	0.6 mm	0.6 mm
Flow Coefficient	Φ	0.455	
Blade Loading Coefficient	ψ	0.996	
Reaction	Λ	0.502	
Nozzle / Rotor Axial Spacing	L_{NR}	29.67 mm	

付表 1.53　タービン静翼の座標（測定位置 N_R=17，半径 R=233.5mm）
ハブ側壁面からの距離 y=58.5mm，スパン方向位置 y/H=0.780

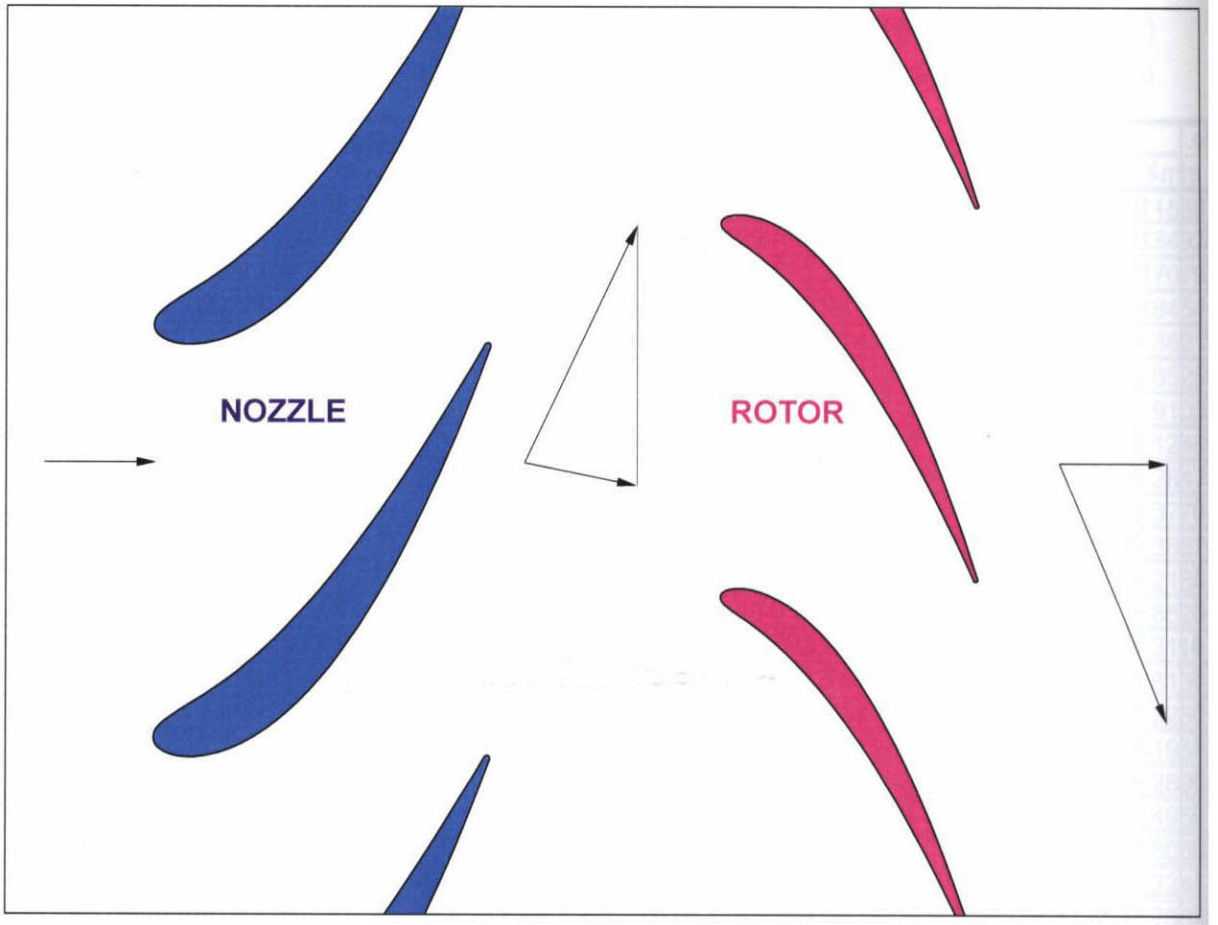
No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-0.1589	233.4999	2.4467	-0.1589	-0.1589	233.4999	2.4467	-0.1589
2	-0.6673	233.4990	2.5231	-0.6673	0.3492	233.4997	2.5279	0.3492
3	-1.0291	233.4977	2.6705	-1.0291	0.7079	233.4989	2.6953	0.7079
4	-1.3767	233.4959	2.8846	-1.3767	1.0454	233.4977	2.9537	1.0454
5	-1.7172	233.4937	3.1609	-1.7172	1.3621	233.4960	3.3072	1.3621
6	-2.0546	233.4910	3.4958	-2.0546	1.6529	233.4941	3.7596	1.6529
7	-2.3923	233.4877	3.8860	-2.3923	1.9102	233.4922	4.3142	1.9103
8	-2.7340	233.4840	4.3294	-2.7341	2.1246	233.4903	4.9731	2.1246
9	-3.0841	233.4796	4.8248	-3.0842	2.2846	233.4888	5.7376	2.2847
10	-3.4471	233.4746	5.3721	-3.4473	2.3777	233.4879	6.6077	2.3778
11	-3.8498	233.4683	6.0062	-3.8500	2.3881	233.4878	7.6361	2.3882
12	-4.4652	233.4573	7.0027	-4.4655	2.2188	233.4895	9.2647	2.2189
13	-5.0842	233.4446	8.0075	-5.0846	1.8520	233.4927	10.8857	1.8520
14	-5.7289	233.4297	9.0316	-5.7295	1.3110	233.4963	12.4876	1.3110
15	-6.4154	233.4119	10.0829	-6.4162	0.6137	233.4992	14.0630	0.6137
16	-7.1559	233.3903	11.1656	-7.1570	-0.2262	233.4999	15.6073	-0.2262
17	-7.9604	233.3643	12.2819	-7.9620	-1.1969	233.4969	17.1182	-1.1969
18	-8.8365	233.3327	13.4326	-8.8386	-2.2892	233.4888	18.5953	-2.2892
19	-9.7901	233.2947	14.6170	-9.7929	-3.4951	233.4738	20.0390	-3.4952
20	-10.8256	233.2489	15.8337	-10.8295	-4.8084	233.4505	21.4505	-4.8088
21	-11.9464	233.1942	17.0809	-11.9516	-6.2238	233.4170	22.8317	-6.2245
22	-13.1546	233.1292	18.3566	-13.1616	-7.7367	233.3718	24.1847	-7.7382
23	-14.4518	233.0523	19.6586	-14.4611	-9.3437	233.3130	25.5114	-9.3462
24	-15.8387	232.9622	20.9849	-15.8509	-11.0415	233.2388	26.8139	-11.0456
25	-17.3154	232.8571	22.3333	-17.3313	-12.8275	233.1474	28.0943	-12.8340
26	-18.8816	232.7353	23.7022	-18.9023	-14.6993	233.0369	29.3545	-14.7090
27	-20.5368	232.5951	25.0896	-20.5634	-16.6548	232.9053	30.5960	-16.6690
28	-22.2799	232.4346	26.4941	-22.3139	-18.6920	232.7506	31.8205	-18.7120
29	-24.1097	232.2520	27.9143	-24.1527	-20.8091	232.5709	33.0294	-20.8368
30	-26.0246	232.0452	29.3490	-26.0788	-23.0042	232.3641	34.2236	-23.0416
31	-28.0228	231.8124	30.7970	-28.0905	-25.2756	232.1280	35.4045	-25.3252
32	-30.1026	231.5515	32.2576	-30.1866	-27.6213	231.8605	36.5727	-27.6862
33	-32.2615	231.2606	33.7301	-32.3650	-30.0397	231.5596	37.7290	-30.1232
34	-34.4973	230.9376	35.2139	-34.6241	-32.5285	231.2232	38.8739	-32.6346
35	-36.8074	230.5807	36.7084	-36.9616	-35.0857	230.8490	40.0079	-35.2191
36	-39.1889	230.1879	38.2136	-39.3753	-37.7092	230.4350	41.1313	-37.8750
37	-41.6388	229.7574	39.7291	-41.8627	-40.3962	229.9791	42.2440	-40.6005
38	-44.1536	229.2874	41.2550	-44.4210	-43.1442	229.4795	43.3463	-43.3936
39	-46.7294	228.7763	42.7912	-47.0471	-45.9502	228.9341	44.4380	-46.2521
40	-49.3622	228.2227	44.3380	-49.7375	-48.8107	228.3413	45.5188	-49.1734
41	-52.0476	227.6253	45.8953	-52.4885	-51.7224	227.6995	46.5882	-52.1550
42	-52.0985	227.6137	46.0376	-52.5408	-51.8744	227.6649	46.5412	-52.3109
43	-52.1582	227.6000	46.1371	-52.6020	-51.9868	227.6392	46.5225	-52.4261
44	-52.1764	227.5959	46.2525	-52.6206	-52.0835	227.6171	46.4610	-52.5254
45	-52.1501	227.6019	46.3662	-52.5937	-52.1501	227.6019	46.3662	-52.5937

X_{3D} , Y_{3D} , Z　: Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D} , Z　: Two-dimensional coordinate system (axial and circumferential coordinates)

付表 1.54　タービン動翼の座標（測定位置 N_R=17，半径 R=233.5mm）
ハブ側壁面からの距離 y=58.5mm，スパン方向位置 y/H=0.780

No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-10.7919	233.2505	14.5144	-10.7957	-10.7919	233.2505	14.5144	-10.7957
2	-10.5114	233.2633	14.5841	-10.5150	-11.0906	233.2365	14.5743	-11.0948
3	-10.3229	233.2717	14.7133	-10.3262	-11.3133	233.2258	14.7044	-11.3177
4	-10.1494	233.2793	14.9013	-10.1526	-11.5319	233.2151	14.9055	-11.5366
5	-9.9849	233.2864	15.1461	-9.9879	-11.7456	233.2044	15.1796	-11.7505
6	-9.8244	233.2932	15.4457	-9.8273	-11.9497	233.1940	15.5286	-11.9550
7	-9.6624	233.3000	15.7985	-9.6652	-12.1381	233.1843	15.9544	-12.1436
8	-9.4929	233.3070	16.2024	-9.4955	-12.3029	233.1757	16.4590	-12.3086
9	-9.3086	233.3144	16.6561	-9.3111	-12.4352	233.1686	17.0438	-12.4411
10	-9.1018	233.3225	17.1582	-9.1042	-12.5245	233.1639	17.7106	-12.5305
11	-8.8506	233.3322	17.7376	-8.8527	-12.5590	233.1620	18.5022	-12.5650
12	-8.4212	233.3481	18.6358	-8.4230	-12.4753	233.1665	19.7693	-12.4812
13	-7.9428	233.3649	19.5201	-7.9443	-12.2349	233.1792	21.0510	-12.2405
14	-7.4114	233.3823	20.3985	-7.4127	-11.8458	233.1993	22.3390	-11.8509
15	-6.8252	233.4002	21.2809	-6.8261	-11.3142	233.2257	23.6232	-11.3187
16	-6.1809	233.4182	22.1772	-6.1817	-10.6475	233.2571	24.8937	-10.6512
17	-5.4737	233.4358	23.0954	-5.4742	-9.8546	233.2920	26.1426	-9.8575
18	-4.6979	233.4527	24.0403	-4.6982	-8.9455	233.3286	27.3648	-8.9476
19	-3.8481	233.4683	25.0136	-3.8483	-7.9294	233.3653	28.5588	-7.9309
20	-2.9203	233.4817	26.0147	-2.9204	-6.8144	233.4005	29.7251	-6.8154
21	-1.9119	233.4922	27.0418	-1.9120	-5.6070	233.4327	30.8657	-5.6075
22	-0.8217	233.4986	28.0922	-0.8217	-4.3120	233.4602	31.9830	-4.3123
23	0.3506	233.4997	29.1635	0.3506	-2.9336	233.4816	33.0795	-2.9337
24	1.6045	233.4945	30.2534	1.6045	-1.4750	233.4953	34.1577	-1.4750
25	2.9392	233.4815	31.3597	2.9392	0.0614	233.5000	35.2194	0.0614
26	4.3532	233.4594	32.4805	4.3535	1.6730	233.4940	36.2668	1.6730
27	5.8452	233.4268	33.6144	5.8458	3.3580	233.4759	37.3012	3.3581
28	7.4137	233.3823	34.7598	7.4150	5.1145	233.4440	38.3240	5.1149
29	9.0569	233.3243	35.9157	9.0592	6.9410	233.3968	39.3363	6.9420
30	10.7733	233.2513	37.0813	10.7771	8.8358	233.3328	40.3391	8.8379
31	12.5611	233.1619	38.2555	12.5672	10.7974	233.2502	41.3332	10.8013
32	14.4187	233.0544	39.4377	14.4279	12.8248	233.1475	42.3191	12.8312
33	16.3446	232.9272	40.6275	16.3580	14.9165	233.0231	43.2975	14.9267
34	18.3373	232.7789	41.8244	18.3562	17.0715	232.8751	44.2686	17.0868
35	20.3952	232.6076	43.0281	20.4212	19.2888	232.7019	45.2330	19.3108
36	22.5170	232.4118	44.2385	22.5521	21.5673	232.5018	46.1907	21.5981
37	24.7016	232.1898	45.4552	24.7479	23.9066	232.2730	47.1419	23.9486
38	26.9479	231.9398	46.6784	27.0081	26.3061	232.0134	48.0866	26.3621
39	29.2555	231.6600	47.9082	29.3325	28.7656	231.7214	49.0249	28.8389
40	31.6240	231.3486	49.1446	31.7215	31.2856	231.3946	49.9566	31.3800
41	34.0551	231.0032	50.3879	34.1770	33.8681	231.0307	50.8816	33.9880
42	34.1793	230.9849	50.4317	34.3025	33.9497	231.0188	50.9341	34.0705
43	34.2396	230.9760	50.5313	34.3635	34.0639	231.0020	50.9159	34.1859
44	34.2576	230.9733	50.6468	34.3817	34.1624	230.9874	50.8549	34.2855
45	34.2305	230.9773	50.7604	34.3543	34.2305	230.9773	50.7604	34.3543

X_{3D}, Y_{3D}, Z　: Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D}, Z　: Two-dimensional coordinate system (axial and circumferential coordinates)



付図 1.19　タービン静翼・動翼の配置（原寸）と設計点における速度三角形
（測定位置 $N_R=18$，半径 $R=237$mm，スパン方向位置 $y/H=0.827$）

付表 1.55　タービン静翼・動翼の仕様（測定位置 $N_R=18$，半径 $R=237$mm）

		Nozzle	Rotor
Chord	C	68.55 mm	58.03 mm
Axial Chord	C_{ax}	44.38 mm	35.66 mm
Blade Pitch	S	53.18 mm	48.04 mm
Solidity	C/S	1.289	1.208
Inlet Blade Angle	α_1	0.00 deg	-4.23 deg
Exit Blade Angle	α_2	65.12 deg	65.85 deg
Blade Turning Angle	$\alpha_2 - \alpha_1$	65.12 deg	61.63 deg
Stagger Angle	ξ	49.90 deg	52.30 deg
Trailing Edge Diameter	d_{TE}	0.6 mm	0.6 mm
Flow Coefficient	Φ	0.448	
Blade Loading Coefficient	ψ	0.967	
Reaction	Λ	0.517	
Nozzle / Rotor Axial Spacing	L_{NR}	29.98 mm	

付表 1.56　タービン静翼の座標（測定位置 $N_R=18$，半径 $R=237$mm）
ハブ側壁面からの距離 $y=62.0$mm，スパン方向位置 $y/H=0.827$

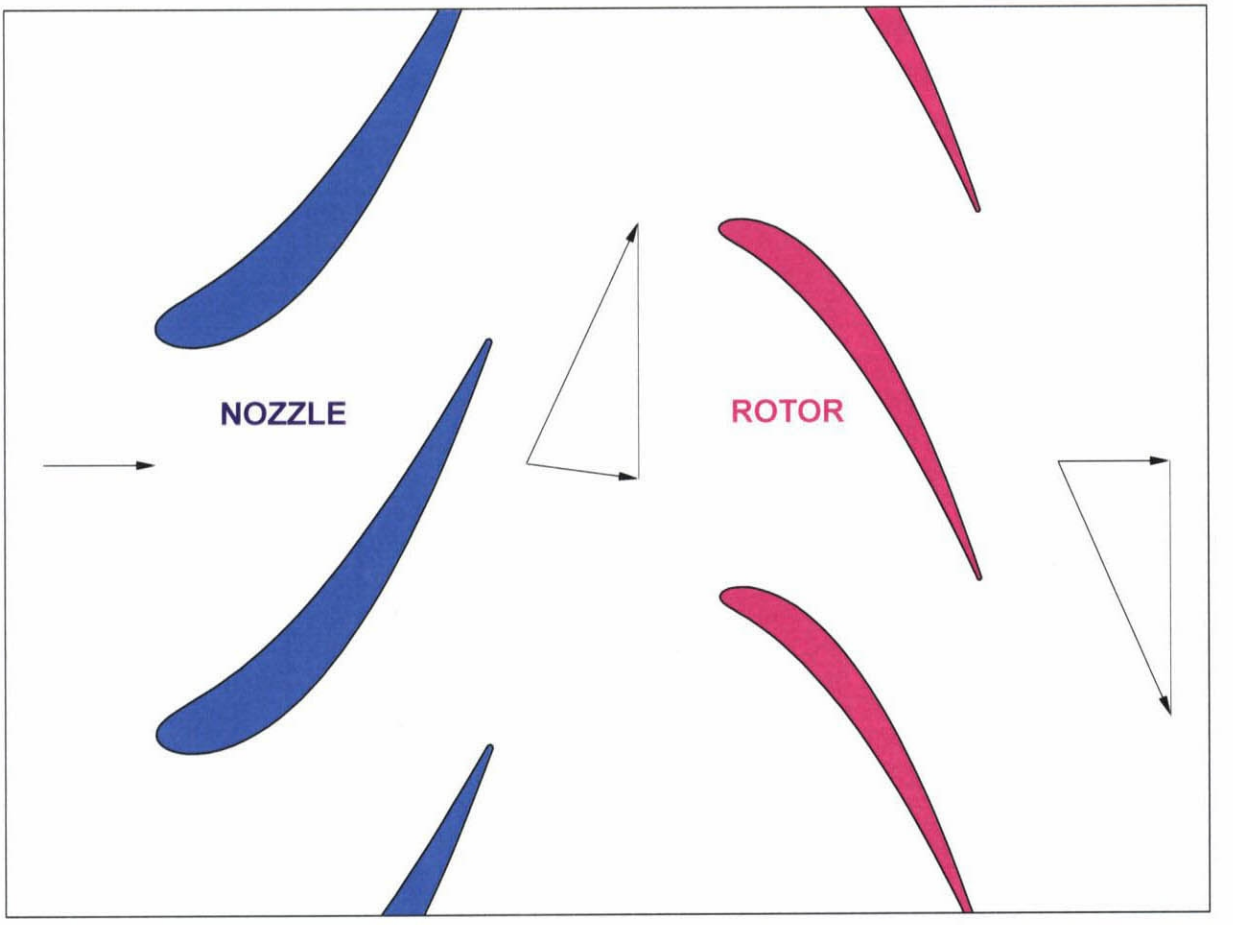
No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-0.1684	236.9999	2.2102	-0.1684	-0.1684	236.9999	2.2102	-0.1684
2	-0.6779	236.9990	2.2870	-0.6779	0.3407	236.9998	2.2918	0.3407
3	-1.0404	236.9977	2.4352	-1.0404	0.7002	236.9990	2.4602	0.7002
4	-1.3887	236.9959	2.6504	-1.3887	1.0383	236.9977	2.7199	1.0383
5	-1.7300	236.9937	2.9281	-1.7300	1.3555	236.9961	3.0754	1.3555
6	-2.0683	236.9910	3.2647	-2.0683	1.6467	236.9943	3.5304	1.6467
7	-2.4069	236.9878	3.6569	-2.4070	1.9042	236.9924	4.0881	1.9042
8	-2.7498	236.9840	4.1025	-2.7499	2.1184	236.9905	4.7506	2.1184
9	-3.1012	236.9797	4.6005	-3.1013	2.2778	236.9891	5.5193	2.2779
10	-3.4658	236.9747	5.1506	-3.4660	2.3699	236.9881	6.3941	2.3699
11	-3.8705	236.9684	5.7882	-3.8707	2.3785	236.9881	7.4280	2.3786
12	-4.4896	236.9575	6.7904	-4.4898	2.2055	236.9897	9.0650	2.2056
13	-5.1128	236.9448	7.8012	-5.1132	1.8340	236.9929	10.6941	1.8340
14	-5.7623	236.9299	8.8318	-5.7629	1.2877	236.9965	12.3037	1.2877
15	-6.4543	236.9121	9.8897	-6.4551	0.5844	236.9993	13.8865	0.5844
16	-7.2009	236.8906	10.9795	-7.2020	-0.2619	236.9999	15.4378	-0.2619
17	-8.0121	236.8645	12.1031	-8.0136	-1.2393	236.9968	16.9556	-1.2393
18	-8.8952	236.8330	13.2612	-8.8973	-2.3385	236.9885	18.4393	-2.3386
19	-9.8562	236.7950	14.4531	-9.8590	-3.5515	236.9734	19.8896	-3.5516
20	-10.8994	236.7492	15.6774	-10.9032	-4.8720	236.9499	21.3076	-4.8723
21	-12.0279	236.6946	16.9322	-12.0331	-6.2944	236.9164	22.6953	-6.2952
22	-13.2439	236.6297	18.2155	-13.2508	-7.8144	236.8711	24.0547	-7.8158
23	-14.5486	236.5530	19.5252	-14.5578	-9.4281	236.8124	25.3879	-9.4306
24	-15.9427	236.4632	20.8590	-15.9548	-11.1324	236.7384	26.6969	-11.1365
25	-17.4263	236.3585	22.2151	-17.4420	-12.9245	236.6473	27.9839	-12.9309
26	-18.9987	236.2373	23.5915	-19.0191	-14.8019	236.5373	29.2506	-14.8115
27	-20.6594	236.0978	24.9864	-20.6857	-16.7624	236.4065	30.4988	-16.7764
28	-22.4072	235.9384	26.3984	-22.4407	-18.8039	236.2529	31.7299	-18.8236
29	-24.2406	235.7571	27.8260	-24.2830	-20.9243	236.0745	32.9454	-20.9516
30	-26.1579	235.5520	29.2681	-26.2113	-23.1218	235.8694	34.1463	-23.1586
31	-28.1573	235.3214	30.7235	-28.2240	-25.3943	235.6356	35.3340	-25.4432
32	-30.2366	235.0633	32.1914	-30.3192	-27.7399	235.3710	36.5089	-27.8036
33	-32.3934	234.7758	33.6712	-32.4951	-30.1566	235.0736	37.6721	-30.2386
34	-34.6252	234.4570	35.1623	-34.7496	-32.6420	234.7413	38.8238	-32.7461
35	-36.9291	234.1052	36.6641	-37.0802	-35.1939	234.3723	39.9646	-35.3246
36	-39.3020	233.7185	38.1765	-39.4844	-37.8099	233.9645	41.0949	-37.9722
37	-41.7405	233.2954	39.6992	-41.9593	-40.4871	233.5162	42.2145	-40.6867
38	-44.2409	232.8342	41.2322	-44.5020	-43.2225	233.0254	43.3237	-43.4658
39	-46.7989	232.3335	42.7756	-47.1085	-46.0127	232.4905	44.4223	-46.3068
40	-49.4096	231.7924	44.3294	-49.7747	-48.8537	231.9102	45.5101	-49.2064
41	-52.0673	231.2099	45.8937	-52.4955	-51.7408	231.2831	46.5865	-52.1608
42	-52.1190	231.1982	46.0372	-52.5485	-51.8917	231.2493	46.5395	-52.3156
43	-52.1782	231.1848	46.1371	-52.6092	-52.0044	231.2240	46.5216	-52.4310
44	-52.1957	231.1809	46.2526	-52.6272	-52.1016	231.2021	46.4606	-52.5307
45	-52.1688	231.1870	46.3662	-52.5996	-52.1688	231.1870	46.3662	-52.5996

X_{3D}, Y_{3D}, Z　: Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D}, Z　: Two-dimensional coordinate system (axial and circumferential coordinates)

付表 1.57　タービン動翼の座標（測定位置 $N_R=18$，半径 $R=237$mm）
ハブ側壁面からの距離 $y=62.0$mm，スパン方向位置 $y/H=0.827$

No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-11.4354	236.7240	14.8194	-11.4399	-11.4354	236.7240	14.8194	-11.4399
2	-11.1485	236.7376	14.8669	-11.1526	-11.7286	236.7096	14.8988	-11.7334
3	-10.9480	236.7470	14.9787	-10.9519	-11.9393	236.6991	15.0410	-11.9443
4	-10.7574	236.7557	15.1487	-10.7611	-12.1398	236.6889	15.2520	-12.1451
5	-10.5710	236.7641	15.3748	-10.5745	-12.3293	236.6791	15.5339	-12.3349
6	-10.3845	236.7724	15.6552	-10.3878	-12.5034	236.6700	15.8887	-12.5092
7	-10.1931	236.7807	15.9883	-10.1963	-12.6562	236.6618	16.3181	-12.6622
8	-9.9916	236.7893	16.3724	-9.9945	-12.7804	236.6552	16.8235	-12.7866
9	-9.7734	236.7984	16.8066	-9.7762	-12.8674	236.6504	17.4062	-12.8738
10	-9.5317	236.8082	17.2898	-9.5343	-12.9076	236.6483	18.0674	-12.9140
11	-9.2434	236.8197	17.8507	-9.2457	-12.8870	236.6494	18.8489	-12.8934
12	-8.7628	236.8380	18.7267	-8.7648	-12.7228	236.6583	20.0929	-12.7289
13	-8.2402	236.8567	19.5960	-8.2419	-12.4106	236.6748	21.3441	-12.4163
14	-7.6697	236.8759	20.4650	-7.6710	-11.9596	236.6981	22.5960	-11.9647
15	-7.0475	236.8952	21.3415	-7.0485	-11.3765	236.7268	23.8406	-11.3809
16	-6.3698	236.9144	22.2332	-6.3706	-10.6685	236.7598	25.0703	-10.6721
17	-5.6316	236.9331	23.1461	-5.6321	-9.8437	236.7955	26.2789	-9.8465
18	-4.8274	236.9508	24.0839	-4.8277	-8.9105	236.8324	27.4628	-8.9126
19	-3.9524	236.9670	25.0477	-3.9526	-7.8770	236.8691	28.6209	-7.8784
20	-3.0029	236.9810	26.0367	-3.0030	-6.7497	236.9039	29.7538	-6.7506
21	-1.9764	236.9918	27.0494	-1.9764	-5.5341	236.9354	30.8633	-5.5346
22	-0.8714	236.9984	28.0834	-0.8714	-4.2344	236.9622	31.9515	-4.2346
23	0.3124	236.9998	29.1367	0.3124	-2.8539	236.9828	33.0207	-2.8540
24	1.5751	236.9948	30.2071	1.5752	-1.3953	236.9959	34.0728	-1.3953
25	2.9162	236.9821	31.2929	2.9163	0.1394	237.0000	35.1096	0.1394
26	4.3348	236.9604	32.3923	4.3350	1.7480	236.9936	36.1329	1.7481
27	5.8299	236.9283	33.5040	5.8305	3.4293	236.9752	37.1440	3.4294
28	7.4006	236.8844	34.6267	7.4018	5.1816	236.9433	38.1440	5.1820
29	9.0454	236.8273	35.7595	9.0476	7.0037	236.8965	39.1341	7.0047
30	10.7635	236.7555	36.9014	10.7672	8.8945	236.8330	40.1151	8.8966
31	12.5533	236.6673	38.0518	12.5592	10.8527	236.7514	41.0875	10.8565
32	14.4139	236.5613	39.2099	14.4228	12.8776	236.6499	42.0522	12.8839
33	16.3440	236.4358	40.3754	16.3570	14.9682	236.5269	43.0095	14.9782
34	18.3425	236.2891	41.5478	18.3609	17.1237	236.3806	43.9598	17.1386
35	20.4084	236.1197	42.7269	20.4337	19.3434	236.2093	44.9034	19.3649
36	22.5405	235.9257	43.9125	22.5747	21.6266	236.0112	45.8405	21.6567
37	24.7382	235.7054	45.1044	24.7833	23.9730	235.7844	46.7712	24.0141
38	27.0008	235.4569	46.3027	27.0595	26.3825	235.5270	47.6955	26.4373
39	29.3280	235.1784	47.5076	29.4033	28.8551	235.2369	48.6134	28.9269
40	31.7200	234.8677	48.7190	31.8154	31.3914	234.9118	49.5248	31.4840
41	34.1786	234.5225	49.9373	34.2982	33.9940	234.5494	50.4296	34.1116
42	34.3027	234.5044	49.9788	34.4236	34.0764	234.5374	50.4829	34.1949
43	34.3637	234.4955	50.0781	34.4853	34.1905	234.5208	50.4639	34.3102
44	34.3825	234.4927	50.1934	34.5042	34.2886	234.5065	50.4023	34.4094
45	34.3561	234.4966	50.3073	34.4776	34.3561	234.4966	50.3073	34.4776

X_{3D}, Y_{3D}, Z　: Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D}, Z　: Two-dimensional coordinate system (axial and circumferential coordinates)



付図 1.20　タービン静翼・動翼の配置（原寸）と設計点における速度三角形
（測定位置 N_R=19，半径 R=240.5mm，スパン方向位置 y/H=0.873）

付表 1.58　タービン静翼・動翼の仕様（測定位置 N_R=19，半径 R=240.5mm）

		Nozzle	Rotor
Chord	C	68.70 mm	58.19 mm
Axial Chord	C_{ax}	44.61 mm	34.91 mm
Blade Pitch	S	53.97 mm	48.75 mm
Solidity	C/S	1.273	1.194
Inlet Blade Angle	α_1	0.00 deg	-7.87 deg
Exit Blade Angle	α_2	64.80 deg	66.17 deg
Blade Turning Angle	$\alpha_2 - \alpha_1$	64.80 deg	58.29 deg
Stagger Angle	ξ	49.74 deg	53.35 deg
Trailing Edge Diameter	d_{TE}	0.6 mm	0.6 mm
Flow Coefficient	Φ	0.442	
Blade Loading Coefficient	ψ	0.939	
Reaction	Λ	0.531	
Nozzle / Rotor Axial Spacing	L_{NR}	30.28 mm	

付表 1.59　タービン静翼の座標（測定位置 $N_R=19$，半径 $R=240.5$mm）
ハブ側壁面からの距離 $y=65.5$mm，スパン方向位置 $y/H=0.873$

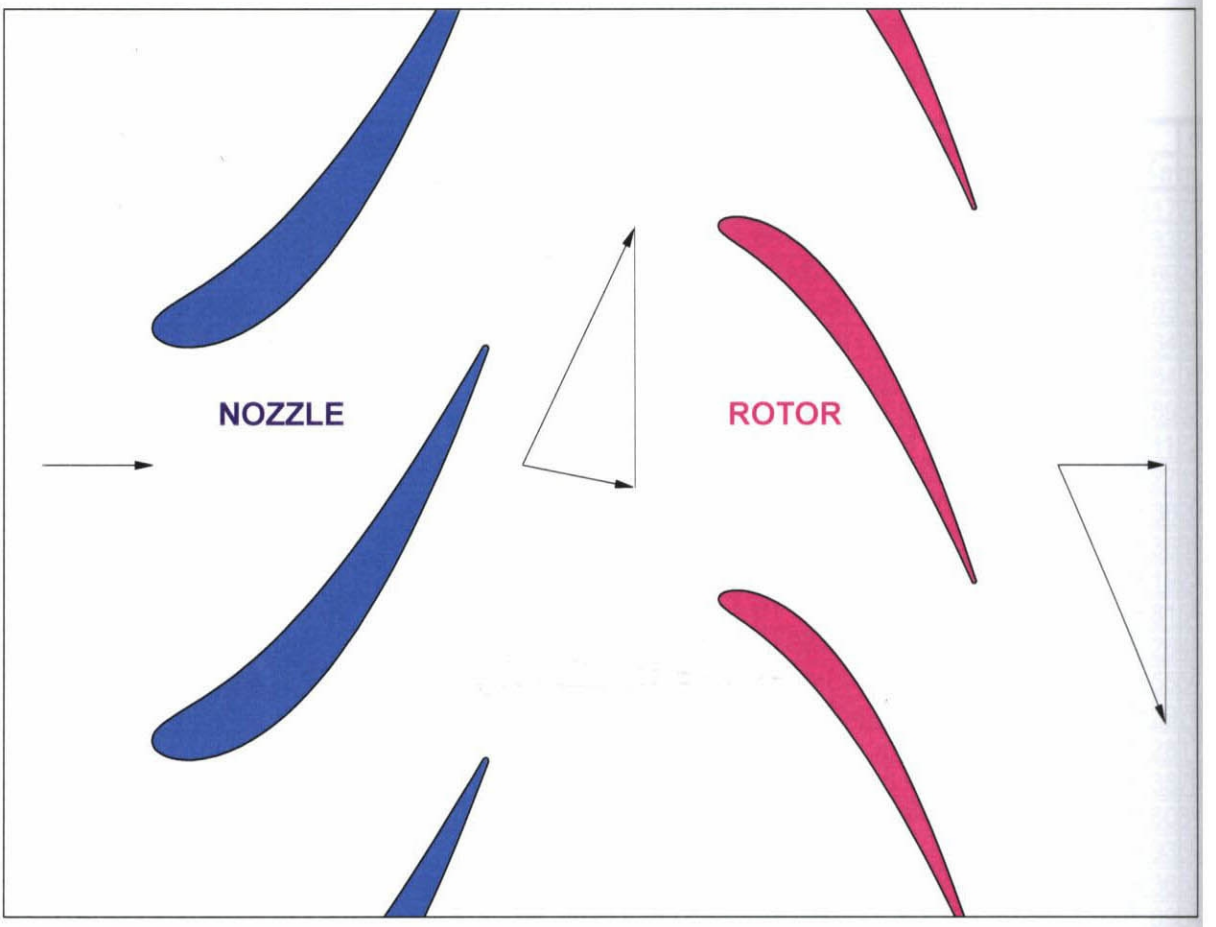
No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-0.1779	240.4999	1.9737	-0.1779	-0.1779	240.4999	1.9737	-0.1779
2	-0.6885	240.4990	2.0508	-0.6885	0.3323	240.4998	2.0558	0.3323
3	-1.0517	240.4977	2.1999	-1.0517	0.6924	240.4990	2.2250	0.6924
4	-1.4008	240.4959	2.4161	-1.4008	1.0312	240.4978	2.4862	1.0312
5	-1.7429	240.4937	2.6953	-1.7429	1.3490	240.4962	2.8436	1.3490
6	-2.0820	240.4910	3.0336	-2.0820	1.6405	240.4944	3.3012	1.6405
7	-2.4216	240.4878	3.4278	-2.4216	1.8981	240.4925	3.8619	1.8982
8	-2.7656	240.4841	3.8757	-2.7657	2.1122	240.4907	4.5281	2.1122
9	-3.1183	240.4798	4.3762	-3.1184	2.2711	240.4893	5.3010	2.2711
10	-3.4845	240.4748	4.9292	-3.4847	2.3620	240.4884	6.1806	2.3620
11	-3.8912	240.4685	5.5703	-3.8914	2.3689	240.4883	7.2199	2.3689
12	-4.5139	240.4576	6.5781	-4.5142	2.1922	240.4900	8.8654	2.1923
13	-5.1413	240.4450	7.5950	-5.1417	1.8161	240.4931	10.5025	1.8161
14	-5.7958	240.4302	8.6319	-5.7963	1.2643	240.4967	12.1198	1.2643
15	-6.4932	240.4123	9.6966	-6.4940	0.5551	240.4994	13.7100	0.5551
16	-7.2460	240.3908	10.7934	-7.2470	-0.2976	240.4998	15.2684	-0.2976
17	-8.0637	240.3648	11.9242	-8.0652	-1.2817	240.4966	16.7930	-1.2817
18	-8.9539	240.3333	13.0897	-8.9560	-2.3879	240.4881	18.2834	-2.3879
19	-9.9223	240.2952	14.2892	-9.9252	-3.6079	240.4729	19.7402	-3.6081
20	-10.9732	240.2495	15.5210	-10.9770	-4.9355	240.4494	21.1647	-4.9359
21	-12.1095	240.1949	16.7835	-12.1146	-6.3651	240.4158	22.5589	-6.3658
22	-13.3331	240.1301	18.0745	-13.3400	-7.8920	240.3705	23.9248	-7.8934
23	-14.6454	240.0537	19.3918	-14.6545	-9.5125	240.3118	25.2644	-9.5150
24	-16.0468	239.9641	20.7332	-16.0587	-11.2233	240.2380	26.5799	-11.2274
25	-17.5371	239.8597	22.0968	-17.5527	-13.0215	240.1472	27.8734	-13.0279
26	-19.1158	239.7391	23.4808	-19.1360	-14.9045	240.0377	29.1467	-14.9141
27	-20.7820	239.6004	24.8832	-20.8080	-16.8700	239.9076	30.4015	-16.8839
28	-22.5345	239.4420	26.3026	-22.5676	-18.9157	239.7550	31.6392	-18.9353
29	-24.3715	239.2619	27.7377	-24.4134	-21.0396	239.5779	32.8614	-21.0665
30	-26.2913	239.0586	29.1872	-26.3439	-23.2393	239.3746	34.0691	-23.2757
31	-28.2917	238.8301	30.6499	-28.3574	-25.5130	239.1429	35.2634	-25.5611
32	-30.3706	238.5747	32.1253	-30.4519	-27.8585	238.8810	36.4452	-27.9212
33	-32.5252	238.2905	33.6123	-32.6252	-30.2735	238.5870	37.6151	-30.3540
34	-34.7530	237.9758	35.1107	-34.8751	-32.7555	238.2589	38.7737	-32.8576
35	-37.0507	237.6289	36.6198	-37.1988	-35.3022	237.8950	39.9214	-35.4302
36	-39.4150	237.2482	38.1394	-39.5936	-37.9107	237.4932	41.0585	-38.0695
37	-41.8422	236.8322	39.6693	-42.0562	-40.5780	237.0520	42.1850	-40.7730
38	-44.3282	236.3795	41.2095	-44.5831	-43.3008	236.5699	43.3011	-43.5382
39	-46.8683	235.8890	42.7600	-47.1701	-46.0752	236.0452	44.4067	-46.3618
40	-49.4569	235.3599	44.3208	-49.8123	-48.8966	235.4769	45.5014	-49.2399
41	-52.0870	234.7918	45.8922	-52.5030	-51.7591	234.8643	46.5849	-52.1672
42	-52.1394	234.7802	46.0369	-52.5567	-51.9091	234.8312	46.5379	-52.3208
43	-52.1982	234.7671	46.1371	-52.6169	-52.0219	234.8062	46.5206	-52.4364
44	-52.2151	234.7634	46.2528	-52.6342	-52.1196	234.7846	46.4603	-52.5365
45	-52.1875	234.7695	46.3662	-52.6060	-52.1875	234.7695	46.3662	-52.6060

X_{3D}, Y_{3D}, Z　: Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D}, Z　: Two-dimensional coordinate system (axial and circumferential coordinates)

付表 1.60　　タービン動翼の座標（測定位置 $N_R=19$，半径 $R=240.5$mm）
ハブ側壁面からの距離 $y=65.5$mm，スパン方向位置 $y/H=0.873$

No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-12.0788	240.1965	15.1243	-12.0839	-12.0788	240.1965	15.1243	-12.0839
2	-11.7854	240.2111	15.1496	-11.7901	-12.3663	240.1819	15.2232	-12.3718
3	-11.5729	240.2214	15.2439	-11.5774	-12.5651	240.1715	15.3775	-12.5709
4	-11.3652	240.2313	15.3960	-11.3694	-12.7476	240.1619	15.5984	-12.7535
5	-11.1570	240.2411	15.6034	-11.1610	-12.9129	240.1531	15.8883	-12.9191
6	-10.9445	240.2508	15.8646	-10.9483	-13.0570	240.1453	16.2489	-13.0634
7	-10.7238	240.2608	16.1780	-10.7273	-13.1743	240.1389	16.6817	-13.1809
8	-10.4902	240.2711	16.5424	-10.4935	-13.2578	240.1343	17.1879	-13.2646
9	-10.2382	240.2820	16.9571	-10.2413	-13.2996	240.1320	17.7686	-13.3064
10	-9.9616	240.2936	17.4214	-9.9644	-13.2907	240.1325	18.4242	-13.2974
11	-9.6362	240.3069	17.9638	-9.6388	-13.2151	240.1367	19.1955	-13.2218
12	-9.1044	240.3276	18.8175	-9.1066	-12.9703	240.1500	20.4164	-12.9766
13	-8.5377	240.3484	19.6718	-8.5395	-12.5863	240.1704	21.6372	-12.5921
14	-7.9279	240.3693	20.5315	-7.9294	-12.0734	240.1968	22.8530	-12.0784
15	-7.2698	240.3901	21.4021	-7.2710	-11.4388	240.2278	24.0580	-11.4431
16	-6.5587	240.4106	22.2891	-6.5596	-10.6896	240.2623	25.2469	-10.6931
17	-5.7894	240.4303	23.1968	-5.7900	-9.8328	240.2989	26.4153	-9.8355
18	-4.9569	240.4489	24.1274	-4.9573	-8.8756	240.3362	27.5609	-8.8776
19	-4.0567	240.4658	25.0817	-4.0569	-7.8245	240.3727	28.6830	-7.8259
20	-3.0856	240.4802	26.0587	-3.0856	-6.6850	240.4071	29.7825	-6.6858
21	-2.0409	240.4913	27.0570	-2.0409	-5.4612	240.4380	30.8610	-5.4617
22	-0.9211	240.4982	28.0746	-0.9211	-4.1567	240.4641	31.9201	-4.1570
23	0.2743	240.4998	29.1099	0.2743	-2.7741	240.4840	32.9618	-2.7742
24	1.5458	240.4950	30.1608	1.5458	-1.3156	240.4964	33.9879	-1.3156
25	2.8933	240.4826	31.2261	2.8933	0.2174	240.4999	34.9997	0.2174
26	4.3163	240.4613	32.3041	4.3166	1.8231	240.4931	35.9990	1.8231
27	5.8146	240.4297	33.3936	5.8152	3.5006	240.4745	36.9868	3.5007
28	7.3874	240.3865	34.4936	7.3886	5.2486	240.4427	37.9641	5.2491
29	9.0340	240.3303	35.6032	9.0361	7.0664	240.3962	38.9319	7.0675
30	10.7536	240.2595	36.7216	10.7572	8.9532	240.3333	39.8910	8.9552
31	12.5456	240.1726	37.8481	12.5513	10.9080	240.2525	40.8419	10.9117
32	14.4091	240.0680	38.9821	14.4177	12.9304	240.1521	41.7853	12.9367
33	16.3434	239.9440	40.1232	16.3560	15.0199	240.0305	42.7215	15.0297
34	18.3478	239.7991	41.2712	18.3656	17.1758	239.8859	43.6509	17.1905
35	20.4215	239.6314	42.4257	20.4462	19.3979	239.7164	44.5738	19.4190
36	22.5640	239.4392	43.5866	22.5973	21.6858	239.5203	45.4903	21.7153
37	24.7748	239.2205	44.7537	24.8188	24.0395	239.2955	46.4005	24.0797
38	27.0536	238.9735	45.9272	27.1110	26.4589	239.0401	47.3044	26.5126
39	29.4005	238.6962	47.1071	29.4742	28.9446	238.7519	48.2020	29.0149
40	31.8159	238.3862	48.2935	31.9094	31.4973	238.4285	49.0931	31.5880
41	34.3021	238.0412	49.4867	34.4195	34.1198	238.0674	49.9776	34.2353
42	34.4261	238.0233	49.5261	34.5448	34.2030	238.0555	50.0318	34.3193
43	34.4879	238.0144	49.6250	34.6072	34.3170	238.0391	50.0121	34.4346
44	34.5074	238.0115	49.7402	34.6269	34.4149	238.0249	49.9497	34.5334
45	34.4818	238.0152	49.8543	34.6010	34.4818	238.0152	49.8543	34.6010

X_{3D}, Y_{3D}, Z　: Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D}, Z　: Two-dimensional coordinate system (axial and circumferential coordinates)



付図 1.21　タービン静翼・動翼の配置（原寸）と設計点における速度三角形
（測定位置 N_R=20，半径 R=244mm，スパン方向位置 y/H=0.920）

付表 1.61　タービン静翼・動翼の仕様（測定位置 N_R=20，半径 R=244mm）

		Nozzle	Rotor
Chord	C	68.85 mm	58.36 mm
Axial Chord	C_{ax}	44.85 mm	34.15 mm
Blade Pitch	S	54.75 mm	49.46 mm
Solidity	C/S	1.257	1.180
Inlet Blade Angle	α_1	0.00 deg	-11.40 deg
Exit Blade Angle	α_2	64.48 deg	66.47 deg
Blade Turning Angle	$\alpha_2 - \alpha_1$	64.48 deg	55.07 deg
Stagger Angle	ξ	49.59 deg	54.40 deg
Trailing Edge Diameter	d_{TE}	0.6 mm	0.6 mm
Flow Coefficient	Φ	0.435	
Blade Loading Coefficient	ψ	0.912	
Reaction	Λ	0.544	
Nozzle / Rotor Axial Spacing	L_{NR}	30.59 mm	

付表 1.62　タービン静翼の座標（測定位置 N_R=20，半径 R=244mm）
ハブ側壁面からの距離 y=69.0mm，スパン方向位置 y/H=0.920

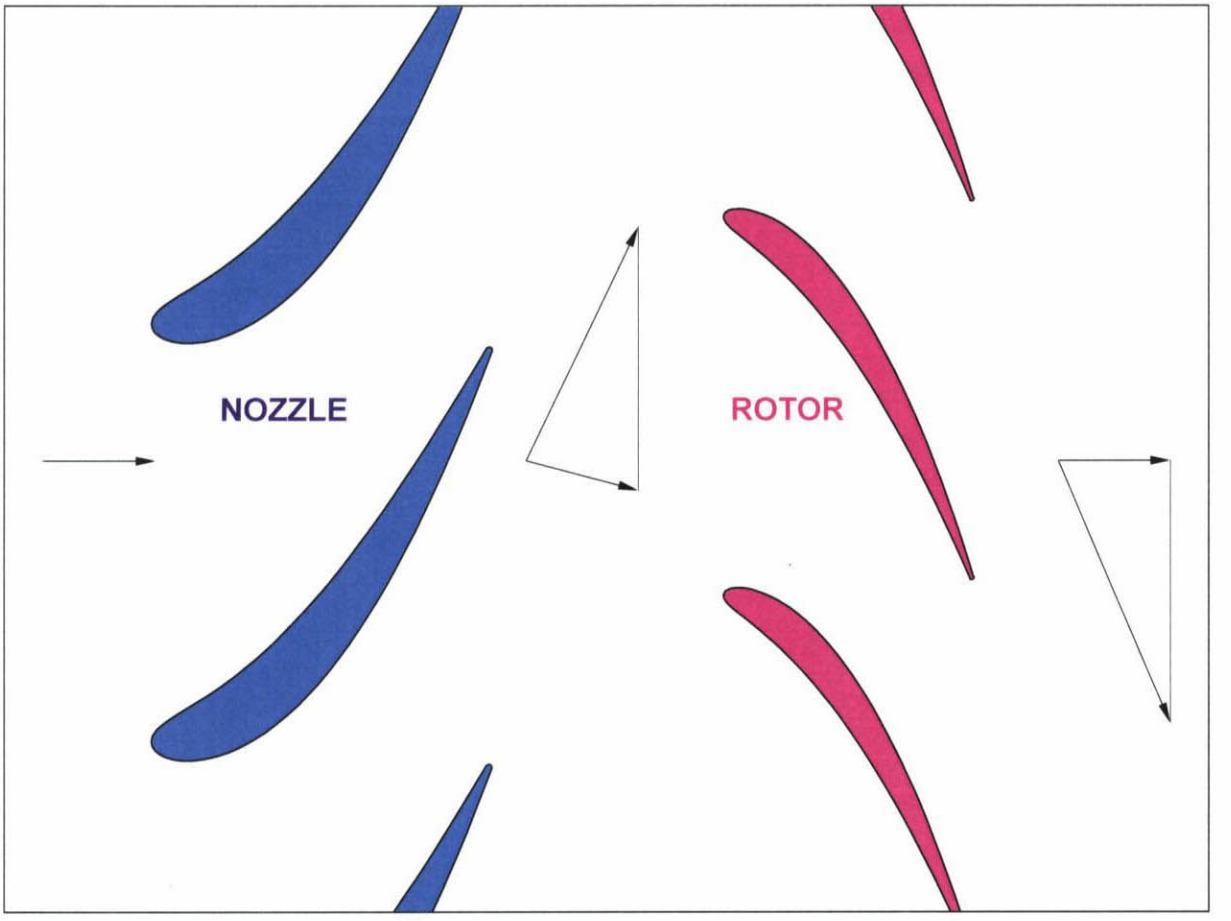
No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-0.1875	243.9999	1.7372	-0.1875	-0.1875	243.9999	1.7372	-0.1875
2	-0.6990	243.9990	1.8147	-0.6990	0.3238	243.9998	1.8197	0.3238
3	-1.0630	243.9977	1.9645	-1.0630	0.6847	243.9990	1.9898	0.6847
4	-1.4128	243.9959	2.1819	-1.4129	1.0241	243.9978	2.2525	1.0242
5	-1.7557	243.9937	2.4625	-1.7557	1.3424	243.9963	2.6119	1.3424
6	-2.0957	243.9910	2.8025	-2.0957	1.6343	243.9945	3.0719	1.6343
7	-2.4363	243.9878	3.1987	-2.4363	1.8921	243.9927	3.6358	1.8921
8	-2.7814	243.9841	3.6488	-2.7815	2.1060	243.9909	4.3056	2.1060
9	-3.1354	243.9799	4.1519	-3.1355	2.2643	243.9895	5.0827	2.2643
10	-3.5032	243.9749	4.7078	-3.5033	2.3542	243.9886	5.9670	2.3542
11	-3.9119	243.9686	5.3523	-3.9121	2.3593	243.9886	7.0118	2.3593
12	-4.5382	243.9578	6.3659	-4.5385	2.1789	243.9903	8.6657	2.1789
13	-5.1699	243.9452	7.3887	-5.1703	1.7981	243.9934	10.3109	1.7981
14	-5.8292	243.9304	8.4321	-5.8297	1.2410	243.9968	11.9359	1.2410
15	-6.5321	243.9126	9.5035	-6.5329	0.5258	243.9994	13.5334	0.5258
16	-7.2910	243.8911	10.6073	-7.2920	-0.3333	243.9998	15.0989	-0.3333
17	-8.1153	243.8650	11.7454	-8.1168	-1.3241	243.9964	16.6304	-1.3241
18	-9.0126	243.8335	12.9183	-9.0147	-2.4372	243.9878	18.1275	-2.4373
19	-9.9885	243.7955	14.1253	-9.9913	-3.6643	243.9725	19.5908	-3.6645
20	-11.0470	243.7498	15.3647	-11.0507	-4.9991	243.9488	21.0218	-4.9994
21	-12.1910	243.6953	16.6348	-12.1961	-6.4357	243.9151	22.4225	-6.4364
22	-13.4224	243.6305	17.9334	-13.4291	-7.9696	243.8698	23.7948	-7.9710
23	-14.7422	243.5542	19.2583	-14.7512	-9.5970	243.8112	25.1409	-9.5994
24	-16.1508	243.4649	20.6074	-16.1626	-11.3142	243.7375	26.4629	-11.3183
25	-17.6480	243.3609	21.9786	-17.6634	-13.1186	243.6471	27.7630	-13.1249
26	-19.2329	243.2408	23.3701	-19.2529	-15.0071	243.5381	29.0429	-15.0166
27	-20.9046	243.1028	24.7801	-20.9303	-16.9776	243.4086	30.3042	-16.9913
28	-22.6617	242.9454	26.2069	-22.6944	-19.0275	243.2570	31.5485	-19.0469
29	-24.5023	242.7666	27.6494	-24.5437	-21.1548	243.0812	32.7775	-21.1814
30	-26.4246	242.5649	29.1063	-26.4765	-23.3569	242.8795	33.9918	-23.3927
31	-28.4262	242.3385	30.5764	-28.4909	-25.6318	242.6500	35.1929	-25.6791
32	-30.5046	242.0857	32.0591	-30.5847	-27.9770	242.3908	36.3815	-28.0387
33	-32.6571	241.8047	33.5535	-32.7554	-30.3904	242.1000	37.5582	-30.4695
34	-34.8808	241.4940	35.0591	-35.0007	-32.8690	241.7760	38.7235	-32.9692
35	-37.1723	241.1519	36.5754	-37.3176	-35.4103	241.4169	39.8781	-35.5358
36	-39.5279	240.7770	38.1023	-39.7029	-38.0114	241.0210	41.0221	-38.1669
37	-41.9438	240.3679	39.6394	-42.1532	-40.6689	240.5869	42.1555	-40.8596
38	-44.4155	239.9234	41.1867	-44.6645	-43.3790	240.1130	43.2786	-43.6108
39	-46.9376	239.4428	42.7443	-47.2321	-46.1376	239.5983	44.3910	-46.4171
40	-49.5042	238.9254	44.3122	-49.8502	-48.9395	239.0417	45.4928	-49.2737
41	-52.1067	238.3713	45.8906	-52.5111	-51.7774	238.4431	46.5833	-52.1741
42	-52.1598	238.3597	46.0365	-52.5655	-51.9264	238.4107	46.5363	-52.3266
43	-52.2181	238.3470	46.1371	-52.6251	-52.0395	238.3860	46.5197	-52.4423
44	-52.2344	238.3434	46.2529	-52.6418	-52.1377	238.3646	46.4599	-52.5428
45	-52.2061	238.3496	46.3662	-52.6129	-52.2061	238.3496	46.3662	-52.6129

X_{3D} , Y_{3D} , Z　: Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D} , Z　: Two-dimensional coordinate system (axial and circumferential coordinates)

付表 1.63　　タービン動翼の座標（測定位置 N_R=20，半径 R=244mm）
ハブ側壁面からの距離 y=69.0mm，スパン方向位置 y/H=0.920

No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-12.7219	243.6681	15.4291	-12.7277	-12.7219	243.6681	15.4291	-12.7277
2	-12.4221	243.6836	15.4322	-12.4274	-13.0040	243.6532	15.5475	-13.0101
3	-12.1977	243.6949	15.5091	-12.2028	-13.1909	243.6432	15.7139	-13.1973
4	-11.9728	243.7061	15.6432	-11.9776	-13.3552	243.6342	15.9447	-13.3619
5	-11.7428	243.7173	15.8320	-11.7473	-13.4963	243.6264	16.2425	-13.5032
6	-11.5044	243.7286	16.0740	-11.5087	-13.6105	243.6201	16.6089	-13.6175
7	-11.2543	243.7403	16.3678	-11.2583	-13.6922	243.6155	17.0452	-13.6994
8	-10.9887	243.7524	16.7124	-10.9924	-13.7352	243.6131	17.5523	-13.7425
9	-10.7029	243.7652	17.1075	-10.7063	-13.7318	243.6133	18.1309	-13.7391
10	-10.3914	243.7786	17.5530	-10.3945	-13.6738	243.6166	18.7810	-13.6809
11	-10.0290	243.7938	18.0769	-10.0318	-13.5432	243.6239	19.5421	-13.5501
12	-9.4460	243.8171	18.9084	-9.4484	-13.2178	243.6417	20.7399	-13.2242
13	-8.8352	243.8400	19.7477	-8.8371	-12.7620	243.6660	21.9303	-12.7678
14	-8.1862	243.8626	20.5979	-8.1877	-12.1872	243.6954	23.1100	-12.1922
15	-7.4922	243.8849	21.4627	-7.4934	-11.5011	243.7288	24.2755	-11.5054
16	-6.7476	243.9067	22.3451	-6.7485	-10.7106	243.7648	25.4234	-10.7141
17	-5.9472	243.9275	23.2475	-5.9478	-9.8219	243.8022	26.5517	-9.8245
18	-5.0864	243.9470	24.1710	-5.0868	-8.8407	243.8398	27.6589	-8.8426
19	-4.1611	243.9645	25.1158	-4.1613	-7.7721	243.8762	28.7451	-7.7734
20	-3.1682	243.9794	26.0807	-3.1683	-6.6203	243.9102	29.8112	-6.6211
21	-2.1053	243.9909	27.0646	-2.1053	-5.3884	243.9405	30.8586	-5.3888
22	-0.9709	243.9981	28.0658	-0.9709	-4.0791	243.9659	31.8886	-4.0793
23	0.2361	243.9999	29.0830	0.2361	-2.6944	243.9851	32.9030	-2.6945
24	1.5164	243.9953	30.1146	1.5164	-1.2359	243.9969	33.9030	-1.2359
25	2.8703	243.9831	31.1593	2.8704	0.2954	243.9998	34.8899	0.2954
26	4.2979	243.9621	32.2158	4.2981	1.8982	243.9926	35.8652	1.8982
27	5.7993	243.9311	33.2833	5.7998	3.5719	243.9739	36.8296	3.5720
28	7.3743	243.8885	34.3605	7.3754	5.3157	243.9421	37.7842	5.3161
29	9.0225	243.8331	35.4469	9.0246	7.1292	243.8958	38.7297	7.1302
30	10.7438	243.7634	36.5418	10.7473	9.0119	243.8335	39.6669	9.0139
31	12.5379	243.6777	37.6444	12.5434	10.9632	243.7536	40.5963	10.9669
32	14.4043	243.5745	38.7543	14.4127	12.9832	243.6543	41.5184	12.9894
33	16.3428	243.4521	39.8711	16.3550	15.0716	243.5341	42.4336	15.0812
34	18.3530	243.3088	40.9946	18.3704	17.2280	243.3910	43.3421	17.2423
35	20.4347	243.1428	42.1245	20.4587	19.4525	243.2234	44.2443	19.4732
36	22.5875	242.9523	43.2607	22.6199	21.7451	243.0291	45.1402	21.7740
37	24.8114	242.7352	44.4030	24.8544	24.1059	242.8063	46.0298	24.1453
38	27.1064	242.4897	45.5516	27.1625	26.5354	242.5528	46.9134	26.5879
39	29.4730	242.2134	46.7066	29.5451	29.0340	242.2664	47.7906	29.1030
40	31.9118	241.9042	47.8680	32.0035	31.6031	241.9447	48.6614	31.6921
41	34.4256	241.5593	49.0363	34.5408	34.2455	241.5849	49.5257	34.3590
42	34.5495	241.5416	49.0734	34.6660	34.3296	241.5729	49.5808	34.4439
43	34.6119	241.5326	49.1719	34.7291	34.4436	241.5567	49.5603	34.5590
44	34.6322	241.5297	49.2870	34.7496	34.5411	241.5428	49.4973	34.6575
45	34.6074	241.5333	49.4013	34.7245	34.6074	241.5333	49.4013	34.7245

X_{3D} , Y_{3D} , Z　　: Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D} , Z　　: Two-dimensional coordinate system (axial and circumferential coordinates)



付図 1.22　タービン静翼・動翼の配置（原寸）と設計点における速度三角形
（測定位置 N_R=21，半径 R=247.5mm，スパン方向位置 y/H=0.967）

付表 1.64　タービン静翼・動翼の仕様（測定位置 N_R=21，半径 R=247.5mm）

		Nozzle	Rotor
Chord	C	69.00 mm	58.55 mm
Axial Chord	C_{ax}	45.08 mm	33.42 mm
Blade Pitch	S	55.54 mm	50.16 mm
Solidity	C/S	1.242	1.167
Inlet Blade Angle	α_1	0.00 deg	-14.80 deg
Exit Blade Angle	α_2	64.16 deg	66.77 deg
Blade Turning Angle	$\alpha_2 - \alpha_1$	64.16 deg	51.97 deg
Stagger Angle	ξ	49.44 deg	55.44 deg
Trailing Edge Diameter	d_{TE}	0.6 mm	0.6 mm
Flow Coefficient	Φ	0.429	
Blade Loading Coefficient	ψ	0.887	
Reaction	Λ	0.557	
Nozzle / Rotor Axial Spacing	L_{NR}	30.88 mm	

付表 1.65　タービン静翼の座標（測定位置 N_R=21，半径 R=247.5mm）
ハブ側壁面からの距離 y=72.5mm，スパン方向位置 y/H=0.967

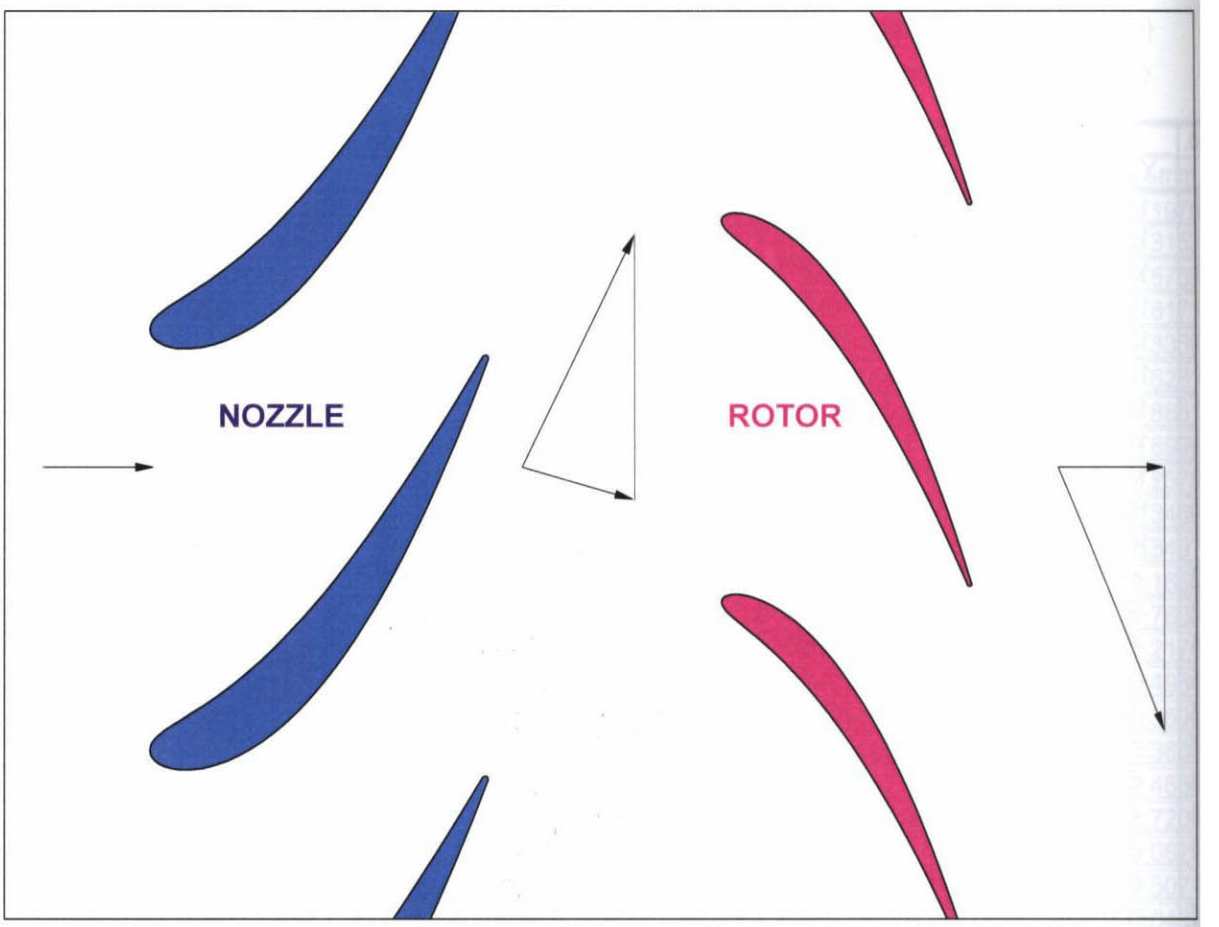
No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-0.1970	247.4999	1.5007	-0.1970	-0.1970	247.4999	1.5007	-0.1970
2	-0.7096	247.4990	1.5786	-0.7096	0.3153	247.4998	1.5836	0.3153
3	-1.0743	247.4977	1.7292	-1.0743	0.6769	247.4991	1.7547	0.6769
4	-1.4249	247.4959	1.9476	-1.4249	1.0171	247.4979	2.0188	1.0171
5	-1.7686	247.4937	2.2296	-1.7686	1.3358	247.4964	2.3801	1.3359
6	-2.1094	247.4910	2.5714	-2.1094	1.6281	247.4946	2.8427	1.6281
7	-2.4509	247.4879	2.9695	-2.4510	1.8861	247.4928	3.4096	1.8861
8	-2.7972	247.4842	3.4219	-2.7972	2.0998	247.4911	4.0831	2.0998
9	-3.1525	247.4799	3.9276	-3.1526	2.2575	247.4897	4.8644	2.2575
10	-3.5219	247.4749	4.4864	-3.5220	2.3463	247.4889	5.7534	2.3463
11	-3.9327	247.4688	5.1343	-3.9328	2.3497	247.4888	6.8037	2.3497
12	-4.5626	247.4579	6.1536	-4.5628	2.1656	247.4905	8.4660	2.1656
13	-5.1985	247.4454	7.1825	-5.1989	1.7802	247.4936	10.1193	1.7802
14	-5.8626	247.4306	8.2322	-5.8631	1.2176	247.4970	11.7520	1.2176
15	-6.5711	247.4128	9.3104	-6.5718	0.4964	247.4995	13.3569	0.4964
16	-7.3360	247.3913	10.4211	-7.3371	-0.3690	247.4997	14.9294	-0.3690
17	-8.1670	247.3652	11.5665	-8.1685	-1.3666	247.4962	16.4677	-1.3666
18	-9.0713	247.3337	12.7469	-9.0734	-2.4866	247.4875	17.9715	-2.4866
19	-10.0546	247.2957	13.9614	-10.0574	-3.7208	247.4720	19.4415	-3.7209
20	-11.1207	247.2500	15.2084	-11.1245	-5.0626	247.4482	20.8789	-5.0629
21	-12.2725	247.1955	16.4862	-12.2775	-6.5063	247.4145	22.2861	-6.5071
22	-13.5116	247.1309	17.7924	-13.5183	-8.0472	247.3691	23.6649	-8.0487
23	-14.8390	247.0548	19.1249	-14.8479	-9.6814	247.3106	25.0175	-9.6838
24	-16.2549	246.9657	20.4816	-16.2666	-11.4052	247.2371	26.3460	-11.4092
25	-17.7589	246.8620	21.8604	-17.7741	-13.2156	247.1469	27.6525	-13.2219
26	-19.3500	246.7424	23.2595	-19.3698	-15.1098	247.0383	28.9390	-15.1192
27	-21.0272	246.6052	24.6769	-21.0526	-17.0852	246.9096	30.2069	-17.0988
28	-22.7890	246.4486	26.1112	-22.8213	-19.1394	246.7589	31.4579	-19.1585
29	-24.6332	246.2711	27.5611	-24.6741	-21.2700	246.5844	32.6935	-21.2962
30	-26.5579	246.0710	29.0254	-26.6092	-23.4744	246.3843	33.9145	-23.5098
31	-28.5606	245.8466	30.5029	-28.6244	-25.7505	246.1568	35.1224	-25.7972
32	-30.6386	245.5963	31.9929	-30.7174	-28.0956	245.9002	36.3177	-28.1563
33	-32.7890	245.3184	33.4946	-32.8856	-30.5072	245.6126	37.5012	-30.5850
34	-35.0086	245.0115	35.0076	-35.1264	-32.9825	245.2925	38.6734	-33.0809
35	-37.2938	244.6741	36.5311	-37.4364	-35.5185	244.9381	39.8348	-35.6416
36	-39.6409	244.3048	38.0652	-39.8123	-38.1122	244.5480	40.9857	-38.2644
37	-42.0454	243.9025	39.6095	-42.2504	-40.7597	244.1207	42.1260	-40.9462
38	-44.5028	243.4661	41.1640	-44.7461	-43.4572	243.6549	43.2560	-43.6837
39	-47.0070	242.9950	42.7287	-47.2943	-46.2000	243.1498	44.3754	-46.4726
40	-49.5514	242.4890	44.3037	-49.8886	-48.9823	242.6046	45.4841	-49.3078
41	-52.1264	241.9485	45.8890	-52.5196	-51.7957	242.0195	46.5816	-52.1815
42	-52.1802	241.9369	46.0361	-52.5747	-51.9437	241.9878	46.5347	-52.3328
43	-52.2380	241.9245	46.1371	-52.6339	-52.0571	241.9635	46.5187	-52.4487
44	-52.2537	241.9211	46.2530	-52.6499	-52.1557	241.9422	46.4595	-52.5496
45	-52.2248	241.9273	46.3662	-52.6203	-52.2248	241.9273	46.3662	-52.6203

X_{3D}, Y_{3D}, Z　: Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D}, Z　: Two-dimensional coordinate system (axial and circumferential coordinates)

付表 1.66　　タービン動翼の座標（測定位置 N_R=21，半径 R=247.5mm）
ハブ側壁面からの距離 y=72.5mm，スパン方向位置 y/H=0.967

No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-13.3650	247.1389	15.7338	-13.3715	-13.3650	247.1389	15.7338	-13.3715
2	-13.0586	247.1553	15.7147	-13.0647	-13.6414	247.1238	15.8718	-13.6484
3	-12.8223	247.1676	15.7743	-12.8281	-13.8164	247.1141	16.0502	-13.8236
4	-12.5804	247.1801	15.8904	-12.5858	-13.9627	247.1058	16.2910	-13.9701
5	-12.3285	247.1927	16.0606	-12.3336	-14.0797	247.0992	16.5967	-14.0873
6	-12.0642	247.2058	16.2833	-12.0690	-14.1639	247.0944	16.9689	-14.1716
7	-11.7848	247.2193	16.5575	-11.7892	-14.2102	247.0917	17.4087	-14.2180
8	-11.4872	247.2333	16.8824	-11.4913	-14.2125	247.0916	17.9167	-14.2204
9	-11.1675	247.2479	17.2579	-11.1713	-14.1640	247.0944	18.4932	-14.1717
10	-10.8211	247.2633	17.6846	-10.8246	-14.0568	247.1005	19.1378	-14.0644
11	-10.4217	247.2805	18.1900	-10.4248	-13.8712	247.1110	19.8887	-13.8785
12	-9.7876	247.3064	18.9993	-9.7902	-13.4652	247.1334	21.0634	-13.4719
13	-9.1326	247.3315	19.8236	-9.1347	-12.9377	247.1616	22.2234	-12.9436
14	-8.4444	247.3559	20.6644	-8.4461	-12.3009	247.1941	23.3670	-12.3060
15	-7.7145	247.3797	21.5232	-7.7158	-11.5634	247.2297	24.4929	-11.5676
16	-6.9365	247.4028	22.4010	-6.9375	-10.7317	247.2672	25.6000	-10.7350
17	-6.1051	247.4247	23.2982	-6.1057	-9.8110	247.3055	26.6881	-9.8135
18	-5.2159	247.4450	24.2146	-5.2163	-8.8058	247.3433	27.7569	-8.8076
19	-4.2654	247.4632	25.1498	-4.2656	-7.7197	247.3796	28.8072	-7.7209
20	-3.2508	247.4787	26.1027	-3.2509	-6.5555	247.4132	29.8399	-6.5563
21	-2.1698	247.4905	27.0722	-2.1698	-5.3155	247.4429	30.8562	-5.3159
22	-1.0206	247.4979	28.0571	-1.0206	-4.0015	247.4677	31.8572	-4.0016
23	0.1980	247.4999	29.0562	0.1980	-2.6147	247.4862	32.8441	-2.6147
24	1.4870	247.4955	30.0683	1.4870	-1.1562	247.4973	33.8181	-1.1562
25	2.8473	247.4836	31.0925	2.8474	0.3734	247.4997	34.7801	0.3734
26	4.2795	247.4630	32.1276	4.2797	1.9732	247.4921	35.7313	1.9733
27	5.7840	247.4324	33.1729	5.7845	3.6431	247.4732	36.6724	3.6433
28	7.3611	247.3905	34.2274	7.3622	5.3828	247.4415	37.6042	5.3832
29	9.0110	247.3359	35.2907	9.0130	7.1919	247.3955	38.5275	7.1929
30	10.7340	247.2671	36.3620	10.7374	9.0705	247.3337	39.4428	9.0726
31	12.5301	247.1826	37.4407	12.5355	11.0185	247.2546	40.3507	11.0222
32	14.3995	247.0808	38.5265	14.4076	13.0361	247.1564	41.2515	13.0421
33	16.3422	246.9599	39.6190	16.3541	15.1233	247.0375	42.1456	15.1327
34	18.3583	246.8182	40.7180	18.3751	17.2801	246.8960	43.0332	17.2942
35	20.4479	246.6539	41.8234	20.4712	19.5071	246.7301	43.9147	19.5274
36	22.6110	246.4650	42.9348	22.6426	21.8043	246.5377	44.7900	21.8326
37	24.8480	246.2495	44.0524	24.8899	24.1723	246.3168	45.6592	24.2109
38	27.1593	246.0053	45.1761	27.2141	26.6118	246.0652	46.5224	26.6633
39	29.5454	245.7302	46.3062	29.6161	29.1235	245.7805	47.3793	29.1911
40	32.0077	245.4216	47.4427	32.0976	31.7089	245.4604	48.2298	31.7963
41	34.5490	245.0768	48.5859	34.6622	34.3713	245.1017	49.0739	34.4828
42	34.6729	245.0592	48.6208	34.7874	34.4562	245.0898	49.1298	34.5684
43	34.7360	245.0503	48.7189	34.8511	34.5701	245.0738	49.1086	34.6835
44	34.7571	245.0473	48.8340	34.8724	34.6672	245.0601	49.0449	34.7816
45	34.7330	245.0508	48.9485	34.8480	34.7330	245.0508	48.9485	34.8480

X_{3D} , Y_{3D} , Z　　: Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D} , Z　　: Two-dimensional coordinate system (axial and circumferential coordinates)



付図 1.23　タービン静翼・動翼の配置（原寸）と設計点における速度三角形
（動翼チップ位置，半径 $R=249$mm，スパン方向位置 $y/H=0.987$）

付表 1.67　タービン静翼・動翼の仕様（動翼チップ位置，半径 $R=249$mm）

		Nozzle	Rotor
Chord	C	69.07 mm	58.64 mm
Axial Chord	C_{ax}	44.18 mm	33.10 mm
Blade Pitch	S	55.88 mm	50.47 mm
Solidity	C/S	1.236	1.1619
Inlet Blade Angle	α_1	0.00 deg	-16.22 deg
Exit Blade Angle	α_2	64.03 deg	66.89 deg
Blade Turning Angle	$\alpha_2 - \alpha_1$	64.03 deg	50.68 deg
Stagger Angle	ξ	49.38 deg	55.88 deg
Trailing Edge Diameter	d_{TE}	0.6 mm	0.6 mm
Flow Coefficient	Φ	0.427	
Blade Loading Coefficient	ψ	0.876	
Reaction	Λ	0.562	
Nozzle / Rotor Axial Spacing	L_{NR}	31.00 mm	

付表 1.68　タービン静翼の座標（動翼チップ位置，半径 R=249mm）
ハブ側壁面からの距離 y=74.0mm，スパン方向位置 y/H=0.987

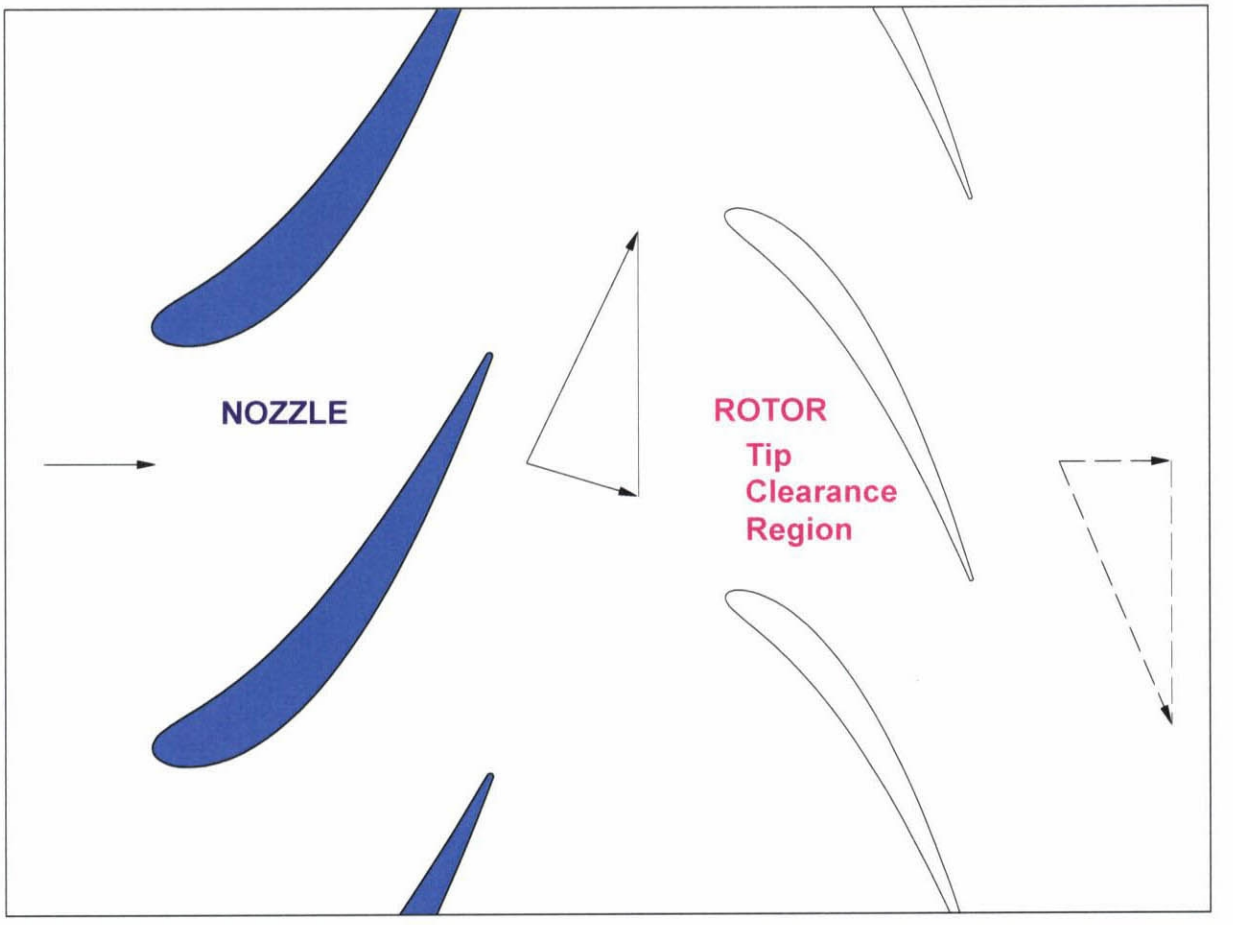
No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-0.2010	248.9999	1.3993	-0.2010	-0.2010	248.9999	1.3993	-0.2010
2	-0.7141	248.9990	1.4774	-0.7141	0.3117	248.9998	1.4824	0.3117
3	-1.0792	248.9977	1.6283	-1.0792	0.6736	248.9991	1.6539	0.6736
4	-1.4301	248.9959	1.8473	-1.4301	1.0140	248.9979	1.9186	1.0140
5	-1.7741	248.9937	2.1299	-1.7741	1.3330	248.9964	2.2808	1.3330
6	-2.1152	248.9910	2.4723	-2.1153	1.6255	248.9947	2.7444	1.6255
7	-2.4572	248.9879	2.8713	-2.4572	1.8835	248.9929	3.3127	1.8835
8	-2.8039	248.9842	3.3247	-2.8040	2.0971	248.9912	3.9878	2.0971
9	-3.1599	248.9799	3.8314	-3.1599	2.2546	248.9898	4.7709	2.2546
10	-3.5299	248.9750	4.3915	-3.5300	2.3429	248.9890	5.6619	2.3430
11	-3.9415	248.9688	5.0409	-3.9417	2.3456	248.9890	6.7145	2.3456
12	-4.5730	248.9580	6.0626	-4.5733	2.1599	248.9906	8.3804	2.1599
13	-5.2107	248.9455	7.0941	-5.2111	1.7725	248.9937	10.0372	1.7725
14	-5.8769	248.9306	8.1466	-5.8775	1.2076	248.9971	11.6732	1.2076
15	-6.5877	248.9128	9.2276	-6.5885	0.4839	248.9995	13.2812	0.4839
16	-7.3553	248.8913	10.3414	-7.3563	-0.3843	248.9997	14.8568	-0.3843
17	-8.1891	248.8653	11.4899	-8.1906	-1.3847	248.9962	16.3980	-1.3847
18	-9.0965	248.8338	12.6734	-9.0985	-2.5077	248.9874	17.9047	-2.5078
19	-10.0830	248.7958	13.8911	-10.0857	-3.7449	248.9718	19.3774	-3.7451
20	-11.1524	248.7501	15.1414	-11.1561	-5.0898	248.9480	20.8177	-5.0902
21	-12.3075	248.6956	16.4224	-12.3125	-6.5366	248.9142	22.2276	-6.5374
22	-13.5499	248.6311	17.7319	-13.5565	-8.0805	248.8689	23.6092	-8.0819
23	-14.8805	248.5550	19.0678	-14.8893	-9.7175	248.8103	24.9645	-9.7200
24	-16.2994	248.4659	20.4277	-16.3111	-11.4441	248.7369	26.2958	-11.4481
25	-17.8064	248.3625	21.8097	-17.8216	-13.2571	248.6468	27.6052	-13.2634
26	-19.4002	248.2431	23.2120	-19.4199	-15.1537	248.5385	28.8944	-15.1631
27	-21.0798	248.1061	24.6326	-21.1050	-17.1313	248.4100	30.1652	-17.1449
28	-22.8435	247.9499	26.0702	-22.8757	-19.1873	248.2596	31.4191	-19.2064
29	-24.6893	247.7730	27.5233	-24.7299	-21.3193	248.0856	32.6575	-21.3455
30	-26.6151	247.5735	28.9908	-26.6660	-23.5248	247.8862	33.8814	-23.5599
31	-28.6182	247.3499	30.4714	-28.6816	-25.8013	247.6596	35.0922	-25.8477
32	-30.6961	247.1007	31.9646	-30.7743	-28.1464	247.4041	36.2904	-28.2067
33	-32.8455	246.8242	33.4694	-32.9415	-30.5573	247.1179	37.4768	-30.6345
34	-35.0634	246.5189	34.9855	-35.1803	-33.0311	246.7994	38.6520	-33.1287
35	-37.3459	246.1834	36.5121	-37.4874	-35.5648	246.4470	39.8163	-35.6869
36	-39.6893	245.8165	38.0493	-39.8593	-38.1553	246.0593	40.9701	-38.3062
37	-42.0890	245.4170	39.5967	-42.2920	-40.7986	245.6348	42.1134	-40.9834
38	-44.5401	244.9840	41.1542	-44.7811	-43.4907	245.1725	43.2463	-43.7150
39	-47.0367	244.5170	42.7220	-47.3210	-46.2268	244.6714	44.3687	-46.4965
40	-49.5717	244.0157	44.3000	-49.9051	-49.0007	244.1310	45.4804	-49.3226
41	-52.1348	243.4809	45.8883	-52.5234	-51.8036	243.5516	46.5809	-52.1848
42	-52.1890	243.4693	46.0360	-52.5789	-51.9511	243.5202	46.5340	-52.3356
43	-52.2466	243.4570	46.1371	-52.6377	-52.0646	243.4960	46.5183	-52.4516
44	-52.2619	243.4537	46.2531	-52.6535	-52.1634	243.4748	46.4594	-52.5527
45	-52.2327	243.4599	46.3662	-52.6236	-52.2327	243.4599	46.3662	-52.6236

X_{3D} , Y_{3D} , Z　: Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D} , Z　: Two-dimensional coordinate system (axial and circumferential coordinates)

付表 1.69　タービン動翼の座標（動翼チップ位置，半径 $R=249$mm）
ハブ側壁面からの距離 $y=74.0$mm，スパン方向位置 $y/H=0.987$

No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-13.6405	248.6261	15.8644	-13.6473	-13.6405	248.6261	15.8644	-13.6473
2	-13.3314	248.6429	15.8358	-13.3378	-13.9146	248.6109	16.0107	-13.9219
3	-13.0900	248.6557	15.8879	-13.0960	-14.0845	248.6013	16.1943	-14.0920
4	-12.8407	248.6687	15.9963	-12.8464	-14.2230	248.5935	16.4394	-14.2307
5	-12.5795	248.6820	16.1585	-12.5849	-14.3297	248.5873	16.7485	-14.3376
6	-12.3041	248.6958	16.3730	-12.3091	-14.4010	248.5832	17.1232	-14.4090
7	-12.0121	248.7101	16.6388	-12.0168	-14.4321	248.5814	17.5645	-14.4402
8	-11.7008	248.7249	16.9552	-11.7051	-14.4171	248.5823	18.0729	-14.4252
9	-11.3666	248.7404	17.3224	-11.3706	-14.3492	248.5862	18.6485	-14.3572
10	-11.0053	248.7567	17.7410	-11.0089	-14.2210	248.5936	19.2907	-14.2287
11	-10.5900	248.7747	18.2385	-10.5932	-14.0118	248.6055	20.0373	-14.0192
12	-9.9340	248.8018	19.0382	-9.9366	-13.5713	248.6299	21.2021	-13.5780
13	-9.2601	248.8278	19.8561	-9.2622	-13.0130	248.6597	22.3490	-13.0189
14	-8.5551	248.8530	20.6929	-8.5568	-12.3497	248.6936	23.4772	-12.3548
15	-7.8098	248.8775	21.5492	-7.8111	-11.5901	248.7301	24.5861	-11.5943
16	-7.0175	248.9011	22.4250	-7.0184	-10.7407	248.7682	25.6757	-10.7440
17	-6.1727	248.9235	23.3199	-6.1733	-9.8063	248.8068	26.7465	-9.8088
18	-5.2714	248.9442	24.2333	-5.2718	-8.7908	248.8448	27.7989	-8.7926
19	-4.3101	248.9627	25.1644	-4.3103	-7.6972	248.8810	28.8338	-7.6984
20	-3.2862	248.9783	26.1121	-3.2863	-6.5278	248.9144	29.8522	-6.5285
21	-2.1974	248.9903	27.0755	-2.1974	-5.2843	248.9439	30.8552	-5.2847
22	-1.0419	248.9978	28.0533	-1.0419	-3.9682	248.9684	31.8437	-3.9684
23	0.1816	248.9999	29.0447	0.1816	-2.5805	248.9866	32.8189	-2.5805
24	1.4744	248.9956	30.0485	1.4744	-1.1220	248.9975	33.7817	-1.1220
25	2.8375	248.9838	31.0639	2.8376	0.4068	248.9997	34.7330	0.4068
26	4.2716	248.9634	32.0898	4.2718	2.0054	248.9919	35.6739	2.0054
27	5.7774	248.9330	33.1256	5.7779	3.6737	248.9729	36.6050	3.6738
28	7.3555	248.8913	34.1704	7.3566	5.4115	248.9412	37.5271	5.4119
29	9.0061	248.8371	35.2237	9.0081	7.2188	248.8954	38.4408	7.2198
30	10.7298	248.7687	36.2849	10.7331	9.0957	248.8338	39.3468	9.0977
31	12.5268	248.6847	37.3534	12.5321	11.0422	248.7550	40.2454	11.0458
32	14.3974	248.5834	38.4289	14.4054	13.0587	248.6573	41.1371	13.0647
33	16.3419	248.4632	39.5110	16.3537	15.1454	248.5390	42.0222	15.1548
34	18.3605	248.3222	40.5995	18.3772	17.3025	248.3981	42.9009	17.3165
35	20.4535	248.1585	41.6943	20.4766	19.5305	248.2329	43.7735	19.5506
36	22.6211	247.9703	42.7952	22.6523	21.8297	248.0412	44.6400	21.8578
37	24.8637	247.7555	43.9021	24.9052	24.2008	247.8212	45.5004	24.2391
38	27.1819	247.5119	45.0152	27.2362	26.6445	247.5703	46.3548	26.6956
39	29.5765	247.2372	46.1346	29.6465	29.1618	247.2865	47.2030	29.2289
40	32.0488	246.9289	47.2604	32.1380	31.7542	246.9669	48.0449	31.8409
41	34.6019	246.5841	48.3929	34.7142	34.4252	246.6088	48.8803	34.5358
42	34.7258	246.5667	48.4268	34.8394	34.5104	246.5969	48.9366	34.6218
43	34.7892	246.5577	48.5248	34.9034	34.6243	246.5809	48.9150	34.7369
44	34.8106	246.5547	48.6398	34.9250	34.7213	246.5673	48.8510	34.8348
45	34.7868	246.5581	48.7544	34.9010	34.7868	246.5581	48.7544	34.9010

X_{3D}, Y_{3D}, Z　: Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D}, Z　: Two-dimensional coordinate system (axial and circumferential coordinates)



付図 1.24　タービン静翼・動翼の配置（原寸）と設計点における速度三角形
（静翼チップ位置，半径 R=249.5mm，スパン方向位置 y/H=0.993）

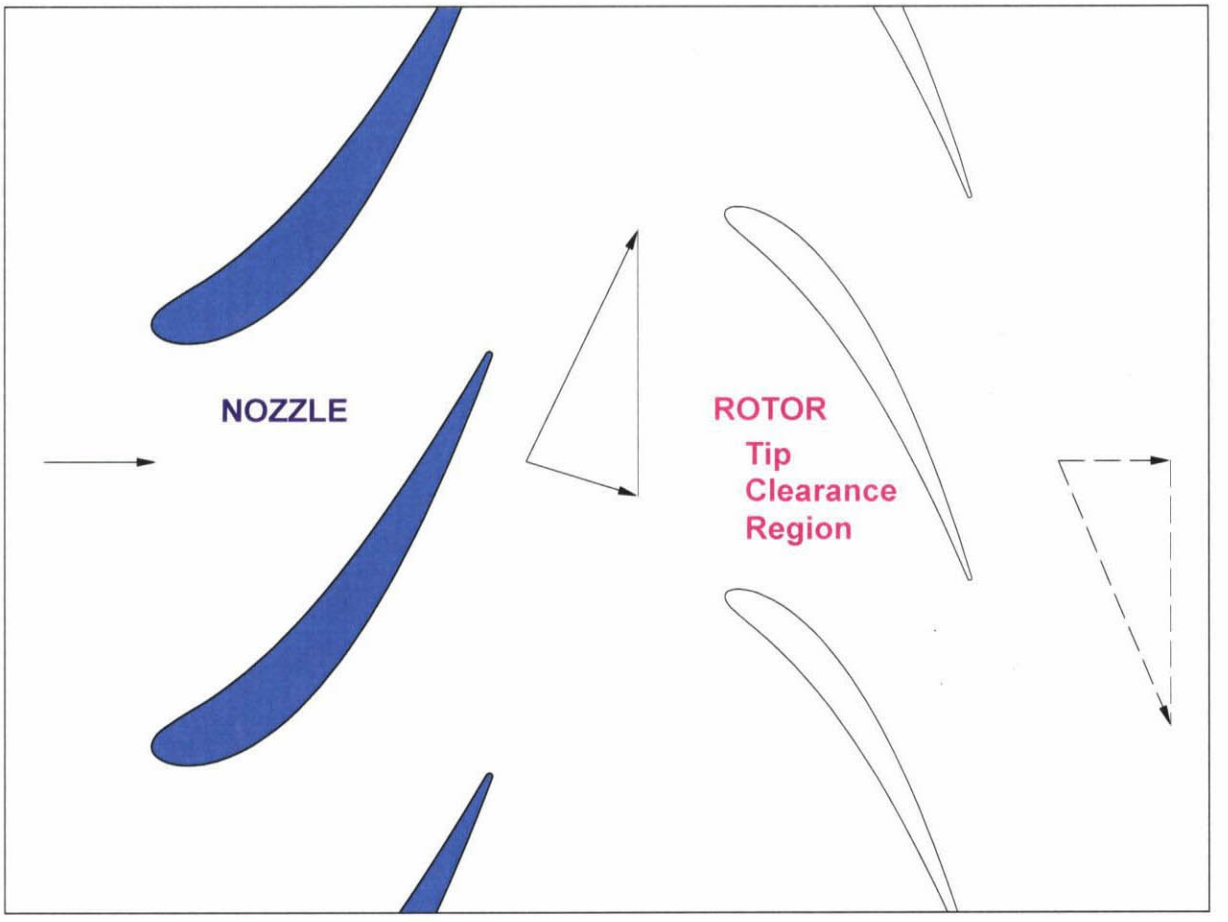
付表 1.70　タービン静翼・動翼の仕様（静翼チップ位置，半径 R=249.5mm）

		Nozzle	Rotor
Chord	C	69.09 mm	-----
Axial Chord	C_{ax}	45.22 mm	-----
Blade Pitch	S	55.99 mm	-----
Solidity	C/S	1.234	-----
Inlet Blade Angle	α_1	0.00 deg	(-16.68 deg)
Exit Blade Angle	α_2	63.98 deg	(66.93 deg)
Blade Turning Angle	$\alpha_2 - \alpha_1$	63.98 deg	(50.23 deg)
Stagger Angle	ξ	49.36 deg	-----
Trailing Edge Diameter	d_{TE}	0.6 mm	-----
Flow Coefficient	Φ	(0.426)	
Blade Loading Coefficient	ψ	(0.872)	
Reaction	Λ	(0.564)	
Nozzle / Rotor Axial Spacing	L_{NR}	-----	

付表 1.71　タービン静翼の座標（静翼チップ位置，半径 $R=249.5$mm）
ハブ側壁面からの距離 $y=74.5$mm，スパン方向位置 $y/H=0.993$

No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-0.2038	249.9999	1.3317	-0.2038	-0.2038	249.9999	1.3317	-0.2038
2	-0.7171	249.9990	1.4100	-0.7171	0.3093	249.9998	1.4150	0.3093
3	-1.0824	249.9977	1.5611	-1.0824	0.6714	249.9991	1.5867	0.6714
4	-1.4335	249.9959	1.7803	-1.4335	1.0120	249.9980	1.8518	1.0120
5	-1.7777	249.9937	2.0633	-1.7777	1.3312	249.9965	2.2146	1.3312
6	-2.1192	249.9910	2.4063	-2.1192	1.6237	249.9947	2.6790	1.6237
7	-2.4614	249.9879	2.8059	-2.4614	1.8817	249.9929	3.2481	1.8818
8	-2.8085	249.9842	3.2599	-2.8085	2.0953	249.9912	3.9242	2.0953
9	-3.1647	249.9800	3.7674	-3.1648	2.2526	249.9899	4.7085	2.2527
10	-3.5353	249.9750	4.3283	-3.5354	2.3407	249.9890	5.6009	2.3407
11	-3.9475	249.9688	4.9787	-3.9476	2.3428	249.9890	6.6551	2.3429
12	-4.5800	249.9580	6.0020	-4.5802	2.1561	249.9907	8.3234	2.1561
13	-5.2189	249.9455	7.0351	-5.2193	1.7673	249.9938	9.9824	1.7673
14	-5.8865	249.9307	8.0895	-5.8870	1.2010	249.9971	11.6206	1.2010
15	-6.5989	249.9129	9.1724	-6.5996	0.4755	249.9995	13.2308	0.4755
16	-7.3681	249.8914	10.2882	-7.3692	-0.3945	249.9997	14.8084	-0.3945
17	-8.2039	249.8654	11.4387	-8.2054	-1.3969	249.9961	16.3516	-1.3969
18	-9.1133	249.8338	12.6244	-9.1153	-2.5219	249.9873	17.8601	-2.5219
19	-10.1018	249.7958	13.8443	-10.1046	-3.7611	249.9717	19.3348	-3.7612
20	-11.1734	249.7502	15.0968	-11.1772	-5.1080	249.9478	20.7769	-5.1083
21	-12.3307	249.6957	16.3800	-12.3358	-6.5568	249.9140	22.1886	-6.5575
22	-13.5753	249.6311	17.6917	-13.5820	-8.1027	249.8687	23.5720	-8.1041
23	-14.9081	249.5551	19.0296	-14.9170	-9.7417	249.8101	24.9293	-9.7441
24	-16.3292	249.4661	20.3917	-16.3408	-11.4701	249.7367	26.2624	-11.4741
25	-17.8380	249.3628	21.7759	-17.8532	-13.2849	249.6468	27.5736	-13.2911
26	-19.4336	249.2435	23.1804	-19.4533	-15.1831	249.5385	28.8648	-15.1924
27	-21.1148	249.1067	24.6032	-21.1400	-17.1621	249.4102	30.1374	-17.1756
28	-22.8799	248.9508	26.0428	-22.9119	-19.2193	249.2601	31.3932	-19.2383
29	-24.7267	248.7742	27.4981	-24.7672	-21.3523	249.0865	32.6335	-21.3783
30	-26.6531	248.5752	28.9676	-26.7039	-23.5584	248.8875	33.8594	-23.5934
31	-28.6566	248.3522	30.4504	-28.7197	-25.8353	248.6615	35.0720	-25.8815
32	-30.7343	248.1036	31.9457	-30.8123	-28.1802	248.4067	36.2722	-28.2403
33	-32.8831	247.8280	33.4526	-32.9787	-30.5907	248.1214	37.4606	-30.6675
34	-35.0999	247.5237	34.9707	-35.2162	-33.0635	247.8040	38.6376	-33.1607
35	-37.3807	247.1896	36.4995	-37.5214	-35.5957	247.4529	39.8039	-35.7171
36	-39.7215	246.8242	38.0387	-39.8906	-38.1841	247.0667	40.9597	-38.3341
37	-42.1180	246.4266	39.5881	-42.3198	-40.8246	246.6442	42.1050	-41.0082
38	-44.5651	245.9958	41.1478	-44.8045	-43.5131	246.1841	43.2399	-43.7358
39	-47.0565	245.5314	42.7176	-47.3389	-46.2446	245.6856	44.3643	-46.5125
40	-49.5851	245.0333	44.2976	-49.9161	-49.0129	245.1484	45.4780	-49.3325
41	-52.1404	244.5023	45.8879	-52.5260	-51.8088	244.5728	46.5805	-52.1870
42	-52.1948	244.4907	46.0358	-52.5816	-51.9561	244.5415	46.5336	-52.3375
43	-52.2522	244.4784	46.1371	-52.6404	-52.0696	244.5174	46.5181	-52.4536
44	-52.2675	244.4752	46.2531	-52.6559	-52.1686	244.4963	46.4592	-52.5548
45	-52.2381	244.4815	46.3662	-52.6259	-52.2381	244.4815	46.3662	-52.6259

X_{3D}, Y_{3D}, Z : Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D}, Z : Two-dimensional coordinate system (axial and circumferential coordinates)



付図 1.25　タービン静翼・動翼の配置（原寸）と設計点における速度三角形
（チップ側壁面，半径 $R=250$mm，スパン方向位置 $y/H=1.000$）

付表 1.72　タービン静翼・動翼の仕様（チップ側壁面，半径 $R=250$mm）

		Nozzle	Rotor
Chord	C	69.11 mm	-----
Axial Chord	C_{ax}	45.25 mm	-----
Blade Pitch	S	56.10 mm	-----
Solidity	C/S	1.232	-----
Inlet Blade Angle	α_1	0.00 deg	(-17.14 deg)
Exit Blade Angle	α_2	63.94 deg	(66.97 deg)
Blade Turning Angle	$\alpha_2 - \alpha_1$	63.94 deg	(49.83 deg)
Stagger Angle	ξ	49.34 deg	-----
Trailing Edge Diameter	d_{TE}	0.6 mm	-----
Flow Coefficient	Φ	(0.425)	
Blade Loading Coefficient	ψ	(0.869)	
Reaction	Λ	(0.566)	
Nozzle / Rotor Axial Spacing	L_{NR}	-----	

付表 1.73　　タービン静翼の座標（チップ側壁面，半径 R=250mm）
ハブ側壁面からの距離 y=75.0mm，スパン方向位置 y/H=1.000

No.	Pressure surface coordinates				Suction surface coordinates			
	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm	X_{3D} mm	Y_{3D} mm	Z mm	X_{2D} mm
1	-13.6405	248.6261	15.8644	-13.6473	-13.6405	248.6261	15.8644	-13.6473
2	-13.3314	248.6429	15.8358	-13.3378	-13.9146	248.6109	16.0107	-13.9219
3	-13.0900	248.6557	15.8879	-13.0960	-14.0845	248.6013	16.1943	-14.0920
4	-12.8407	248.6687	15.9963	-12.8464	-14.2230	248.5935	16.4394	-14.2307
5	-12.5795	248.6820	16.1585	-12.5849	-14.3297	248.5873	16.7485	-14.3376
6	-12.3041	248.6958	16.3730	-12.3091	-14.4010	248.5832	17.1232	-14.4090
7	-12.0121	248.7101	16.6388	-12.0168	-14.4321	248.5814	17.5645	-14.4402
8	-11.7008	248.7249	16.9552	-11.7051	-14.4171	248.5823	18.0729	-14.4252
9	-11.3666	248.7404	17.3224	-11.3706	-14.3492	248.5862	18.6485	-14.3572
10	-11.0053	248.7567	17.7410	-11.0089	-14.2210	248.5936	19.2907	-14.2287
11	-10.5900	248.7747	18.2385	-10.5932	-14.0118	248.6055	20.0373	-14.0192
12	-9.9340	248.8018	19.0382	-9.9366	-13.5713	248.6299	21.2021	-13.5780
13	-9.2601	248.8278	19.8561	-9.2622	-13.0130	248.6597	22.3490	-13.0189
14	-8.5551	248.8530	20.6929	-8.5568	-12.3497	248.6936	23.4772	-12.3548
15	-7.8098	248.8775	21.5492	-7.8111	-11.5901	248.7301	24.5861	-11.5943
16	-7.0175	248.9011	22.4250	-7.0184	-10.7407	248.7682	25.6757	-10.7440
17	-6.1727	248.9235	23.3199	-6.1733	-9.8063	248.8068	26.7465	-9.8088
18	-5.2714	248.9442	24.2333	-5.2718	-8.7908	248.8448	27.7989	-8.7926
19	-4.3101	248.9627	25.1644	-4.3103	-7.6972	248.8810	28.8338	-7.6984
20	-3.2862	248.9783	26.1121	-3.2863	-6.5278	248.9144	29.8522	-6.5285
21	-2.1974	248.9903	27.0755	-2.1974	-5.2843	248.9439	30.8552	-5.2847
22	-1.0419	248.9978	28.0533	-1.0419	-3.9682	248.9684	31.8437	-3.9684
23	0.1816	248.9999	29.0447	0.1816	-2.5805	248.9866	32.8189	-2.5805
24	1.4744	248.9956	30.0485	1.4744	-1.1220	248.9975	33.7817	-1.1220
25	2.8375	248.9838	31.0639	2.8376	0.4068	248.9997	34.7330	0.4068
26	4.2716	248.9634	32.0898	4.2718	2.0054	248.9919	35.6739	2.0054
27	5.7774	248.9330	33.1256	5.7779	3.6737	248.9729	36.6050	3.6738
28	7.3555	248.8913	34.1704	7.3566	5.4115	248.9412	37.5271	5.4119
29	9.0061	248.8371	35.2237	9.0081	7.2188	248.8954	38.4408	7.2198
30	10.7298	248.7687	36.2849	10.7331	9.0957	248.8338	39.3468	9.0977
31	12.5268	248.6847	37.3534	12.5321	11.0422	248.7550	40.2454	11.0458
32	14.3974	248.5834	38.4289	14.4054	13.0587	248.6573	41.1371	13.0647
33	16.3419	248.4632	39.5110	16.3537	15.1454	248.5390	42.0222	15.1548
34	18.3605	248.3222	40.5995	18.3772	17.3025	248.3981	42.9009	17.3165
35	20.4535	248.1585	41.6943	20.4766	19.5305	248.2329	43.7735	19.5506
36	22.6211	247.9703	42.7952	22.6523	21.8297	248.0412	44.6400	21.8578
37	24.8637	247.7555	43.9021	24.9052	24.2008	247.8212	45.5004	24.2391
38	27.1819	247.5119	45.0152	27.2362	26.6445	247.5703	46.3548	26.6956
39	29.5765	247.2372	46.1346	29.6465	29.1618	247.2865	47.2030	29.2289
40	32.0488	246.9289	47.2604	32.1380	31.7542	246.9669	48.0449	31.8409
41	34.6019	246.5841	48.3929	34.7142	34.4252	246.6088	48.8803	34.5358
42	34.7258	246.5667	48.4268	34.8394	34.5104	246.5969	48.9366	34.6218
43	34.7892	246.5577	48.5248	34.9034	34.6243	246.5809	48.9150	34.7369
44	34.8106	246.5547	48.6398	34.9250	34.7213	246.5673	48.8510	34.8348
45	34.7868	246.5581	48.7544	34.9010	34.7868	246.5581	48.7544	34.9010

X_{3D} , Y_{3D} , Z　　: Three-dimensional coordinate system (Cartesian rectangular coordinates)
X_{2D} , Z　　: Two-dimensional coordinate system (axial and circumferential coordinates